AUTHOR INDEX

Abbas, A. K. *See* Harel-Bellan, Durum, Muegge, Abbas, and Farrar.

Abraham, E. *See* Pawlowski, Kaplan, Abraham, and Cohn.

Achtman, M., Neibert, M., Crowe, B. A., Strittmatter, W., Kusecek, B., Weyse, E., Walsh, M. J., Slawig, B., Morelli, G., Moll, A., and Blake, M. Purification and characterization of eight class 5 outer membrane protein variants from a clone of *Neisseria meningitidis* serogroup A. 507.

Addis, J. B. L. *See* Letarte, Vera, Tran, Addis, Onizuka, Quackenbush, Jongeneel, and McInnes.

Adelberg, D. R. *See* Britigan, Coffman, Adelberg, and Cohen.

Adelman, D. C. *See* Sherr, Adelman, Saxon, Gilly, Wall, and Sidell.

Aderem, A. A. *See* Nusrat, Wright, Aderem, Steinman, and Cohn.

Adorini, L., Appella, E., Doria, G., and Nagy, Z. A. Mechanisms influencing the immunodominance of T cell determinants. 2091.

Ahnert-Hilger, G. *See* Schrezenmeier, Ahnert-Hilger, and Fleischer.

Ährlund-Richter, L. *See* Höglund, Ljunggren, Öhlén, Ährlund-Richter, Scangos, Bieberich, Jay, Klein, and Kärre.

Akabane, T. *See* Koike, Nakahata, Takagi, Kobayashi, Ishiguro, Tsuji, Naganuma, Okano, Akiyama, and Akabane.

Akagi, M. *See* Mita, Harada, Naomi, Hitoshi, Sakamoto, Akagi, Tominaga, and Takatsu.

Akiyama, Y. *See* Koike, Nakahata, Takagi, Kobayashi, Ishiguro, Tsuji, Naganuma, Okano, Akiyama, and Akabane.

Alcover, A. *See* Moingeon, Alcover, Clayton, Chang, Transy, and Reinherz.

Allen, J. B. *See* Wahl, Hunt, Bansal, McCartney-Francis, Ellingsworth, and Allen.

Alonso, J. M. *See* Toribio, de la Hera, Borst, Marcos, Márquez, Alonso, Bárcena, and Martínez-A.

Alpers, C. E. *See* Johnson, Couser, Alpers, Vissers, Schulze, and Klebanoff.

Alt, F. W. *See* Okada, Bank, Rogozinski, Takihara, Mak, Chess, and Alt.

— *See* Rothman, Lutzker, Cook, Coffman, and Alt.

— *See* Yancopoulos, Malynn, and Alt.

Althage, A. *See* Zinkernagel, Rüedi, Althage, Hengartner, and Reimann.

Alvarez, F. *See* Gueguen, Meunier-Rotival, Bernard, and Alvarez.

Alvaro-Gracia, J. *See* Firestein, Xu, Townsend, Broide, Alvaro-Gracia, Glasebrook, and Zvaifler.

Ambrus, J. L., Jr. *See* Peters, Ambrus, Fauci, and Brown.

Anand, R. *See* Tokunaga, Saueracker, Kay, Christiansen, Anand, and Dawkins.

Anderson, L. *See* Magowan, Wollish, Anderson, and Leech.

Ando, D. G. *See* Kono, Urban, Horvath, Ando, Saavedra, and Hood.

Andrew, M. *See* Townsend, Bastin, Gould, Brownlee, Andrew, Coupar, Boyle, Chan, and Smith.

Andrews, N. W. *See* Ley, Andrews, Robbins, and Nussenzweig.

Antoni, G. *See* Boraschi, Nencioni, Villa, Censini, Bossu, Ghiara, Presentini, Perin, Frasca, Doria, Fuu

Appella, E. *See* Adorini, Appella, Doria, and Nagy.

Arce, M. A. *See* Lublin, Liszewski, Post, Arce, Le Beau, Rebentisch, Lemons, Seya, and Atkinson.

Arnold, L. W. *See* Mercolino, Arnold, Hawkins, and Haughton.

Arp, B. *See* Mellins, Arp, Ochs, Erlich, and Pious.

Askonas, B. A. *See* Cannon, Openshaw, and Askonas.

Atkinson, J. P. *See* Hourcade, Miesner, Atkinson, and Holers.

— *See* Lublin, Liszewski, Post, Arce, Le Beau, Rebentisch, Lemons, Seya, and Atkinson.

Aubry, J.-P. *See* Defrance, Vanbervliet, Aubry, and Banchereau.

Avnur, Z. *See* Levy, Mendel, Kon, Avnur, and Levy.

Awwad, M., and North, R. J. Immunologically mediated regression of a murine lymphoma after treatment with anti-L3T4 antibody.A consequence of removing L3T4$^+$ suppressor T cells from a host generating predominantly Lyt-2$^+$ T cell–mediated immunity. 2193.

B

Babcock, S. K. *See* Kotzin, Babcock, and Herron.

Bacchetta, R. *See* Roncarolo, Yssel, Touraine, Bacchetta, Gebuhrer, De Vries, and Spits.

Baglioni, C. *See* Camussi, Tetta, Bussolino, and Baglioni.

Baker, R. C. *See* Santoro, Morris, Murphy, and Baker.

Balch, C. M. *See* Itoh, Platsoucas, and Balch.

Banchereau, J. *See* Defrance, Vanbervliet, Aubry, and Banchereau.

— *See* Karray, DeFrance, Merle-Béral, Banchereau, Debré, and Galanaud.

Band, H. *See* Hochstenbach, Parker, McLean, Gieselmann, Band, Bank, Chess, Spits, Strominger, Seidman, and Brenner.

Bank, I. *See* Hochstenbach, Parker, McLean, Gieselmann, Band, Bank, Chess, Spits, Strominger, Seidman, and Brenner.

— *See* Okada, Bank, Rogozinski, Takihara, Mak, Chess, and Alt.

Bansal, G. *See* Wahl, Hunt, Bansal, McCartney-Francis, Ellingsworth, and Allen.

Barbosa, J. A. *See* Bernhard, Le, Barbosa, Lacy, and Engelhard.

Bárcena, A. *See* Toribio, de la Hera, Borst, Marcos, Márquez, Alonso, Bárcena, and Martínez-A.

Barker, R. L., Gleich, G. J., and Pease, L. R. Acidic precursor revealed in human eosinophil granule major basic protein cDNA. 1493.

Barrera, O. *See* Swanson, Barrera, Sola, and Boslego.

Barton, R. W. *See* Rosenstreich, Tu, Kinkade, Maurer-Fogy, Kahn, Barton, and Farina.

Bartow, T. J. *See* Klickstein, Bartow, Miletic, Rabson, Smith, and Fearon.

Bastin, J. *See* Townsend, Bastin, Gould, Brownlee, Andrew, Coupar, Boyle, Chan, and Smith.

Bauer, D. *See* Sherry, Tekamp-Olson, Gallegos, Bauer, Davatelis, Wolpe, Masiarz, Coit, and Cerami.

Beachey, E. H. *See* Poirier, Kehoe, and Beachey.

Belardelli, F. *See* Gresser, Maury, Vignaux, Haller, Belardelli, and Tovey.

Bell, M. P. *See* Buerstedde, Pease, Nilson, Bell, Chase, Buerstedde and McKean.

Benaroch, P., Georgatsou, E., and Bordenave, G. Cellular induction of chronic allotype suppression of IgG2a in $Igh^{b/b}$ homozygous mice and its abrogation by in vivo treatment with anti-CD8 monoclonal antibody. 891.

Bennink, J. R., and Yewdell, J. W. Murine cytotoxic T lymphocyte recognition of individual influenza virus proteins.High frequency of nonresponder MHC class I alleles. 1935.

Berkower, I. *See* Jin, Shih, and Berkower.

Bernard, O. *See* Gueguen, Meunier-Rotival, Bernard, and Alvarez.

Bernhard, E. J., Le, A.-X. T., Barbosa, J. A., Lacy, E., and Engelhard, V. H. Cytotoxic T lymphocytes from HLA-A2 transgenic mice specific for HLA-A2 expressed on human cells. 1157.

Bertini, R. *See* Boraschi, Nencioni, Villa, Censini, Bossu, Ghiara, Presentini, Perin, Frasca, Doria, Forni, Musso, Giovarelli, Ghezzi, Bertini, Besedovsky, Del Rey, Sipe, Antoni, Silvestri, and Tagliabue.

Berzofsky, J. A. *See* Brett, Cease, and Berzofsky.

Besedovsky, H. O. *See* Boraschi, Nencioni, Villa, Censini, Bossu, Ghiara, Presentini, Perin, Frasca, Doria, Forni, Musso, Giovarelli, Pietro Ghezzi, Bertini, Besedovsky, Del Rey, Sipe, Antoni, Silvestri, Tagliabue.

Bevan, M. J. *See* Shimonkevitz and Bevan.

Bhakdi, S., Muhly, M., Mannhardt, U., Hugo, F., Klapettek, K., Mueller-Eckhardt, C., and Roka, L. Staphylococcal α toxin promotes blood coagulation via attack on human platelets. 527.

Biassoni, R. *See* Ciccone, Viale, Pende, Malnati, Biassoni, Melioli, Moretta, Long, and Moretta.

Biddison, W. E. *See* Hogan, Shimojo, Walk, Engelhard, Maloy, Coligan, and Biddison.

Bieberich, C. *See* Höglund, Ljunggren, Öhlén, Ährlund-Richter, Scangos, Bieberich, Jay, Klein, and Kärre.

Bierer, B. E., Peterson, A., Gorga, J. C., Herrmann, S. H., and Burakoff, S. J. Synergistic T cell activation via the physiological ligands for CD2 and the T cell receptor. 1145.

Bindon, C. I., Hale, G., Bruggemann, M., and Waldmann, H. Human monoclonal IgG isotypes differ in complement activating function at the level of C4 as well as C1q. 127.

Bird, J., Galili, N., Link, M., Stites, D., and Sklar, J. Continuing rearrangement but absence of somatic hypermutation in immunoglobulin genes of human B cell precursor leukemia. 229.

Blake, M. S. *See* Wetzler, Blake, and Gotschlich.

Blake, M. *See* Achtman, Neibert, Crowe, Strittmatter, Kusecek, Weyse, Walsh, Slawig, Morelli, Moll, and Blake.

— *See* Fillit, Blake, MacDonald, and McCarty.

Blohm, D. *See* Nawroth, Handley, Matsueda, DeWaal, Gerlach, Blohm, and Stern.

Bluestone, J. A., Cron, R. Q., Cotterman, M., Houlden, B. A., and Matis, L. A. Structure and specificity of T cell receptor γ/δ on major histocompatibility complex antigen-specific $CD3^+$, $CD4^-$, $CD8^-$ T lymphocytes. 1899.

Bolognesi, D. P. *See* Chaffee, Leeds, Matthews, Weinhold, Skinner, Bolognesi, and Hershfield.

Bonavida, B. *See* Katz, Ohnishi, Lebow, and Bonavida.

Boraschi, D., Nencioni, L., Villa, L., Censini, S., Bossu, P., Ghiara, P., Presentini, R., Perin, F., Frasca, D., Doria, G., Forni, G., Musso, T., Giovarelli, M., Ghezzi, P., Bertini, R., Besedovsky, H. O., Del Rey, A., Sipe, J. D., Antoni, G., Silvestri, S., and Tagliabue, A. In vivo stimulation and restoration of the immune response by the noninflammatory fragment 163–171 of human interleukin 1β. 675.

Bordenave, G. *See* Benaroch, Georgatsou, and Bordenave.

Bories, J. C. *See* Font, Chen, Bories, Duparc, Loiseau, Degos, Cann, Cohen, Dausset, and Sigaux.

Borst, J. *See* Toribio, de la Hera, Borst, Marcos, Márquez, Alonso, Bárcena, and Martínez-A.

Borysiewicz, L. K., Hickling, J. K., Graham, S., Sinclair, J., Cranage, M. P., Smith, G. L., and Sissons, J. G. P. Human cytomegalovirus-specific cytotoxic T cells.Relative frequency of stage-specific CTL recognizing the 72-kD immediate early protein and glycoprotein B expressed by recombinant vaccinia virus. 919.

Boslego, J. *See* Swanson, Barrera, Sola, and Boslego.

Bossu, P. *See* Boraschi, Nencioni, Villa, Censini, Bossu, Ghiara, Presentini, Perin, Frasca, Doria, Forni, Musso, Giovarelli, Ghezzi, Bertini, Besedovsky, Del Rey, Sipe, Antoni, Silvestri, and Tagliabue.

Bottino, C., Tambussi, G., Ferrini, S., Ciccone, E., Varese, P., Mingari, M. C., Moretta, L., and Moretta, A. Two subsets of human T lymphocytes expressing γ/δ antigen receptor are identifiable by monoclonal antibodies directed to two distinct molecular forms of the receptor. 491.

— *See* Ciccone, Ferrini, Bottino, Viale, Prigione, Pantaleo, Tambussi, Moretta, and Moretta.

— *See* Moretta, Bottino, Ciccone, Tambussi, Mingari, Ferrini, Casorati, Varese, Viale, Migone, and Moretta.

— *See* Pantaleo, Zocchi, Ferrini, Poggi, Tambussi, Bottino, Moretta, and Moretta.

Boyle, D. *See* Townsend, Bastin, Gould, Brownlee, Andrew, Coupar, Boyle, Chan, and Smith.

Bradt, B. M. *See* Mold, Bradt, Nemerow, and Cooper.

Braun, D. *See* Tuomanen, Towbin, Rosenfelder, Braun, Larson, Hansson, and Hill.

Brenner, M. B. *See* Hochstenbach, Parker, McLean, Gieselmann, Band, Bank, Chess, Spits, Strominger, Seidman, and Brenner.

Brenner, M. *See* Saito, Hochstenbach, Marusic-Galesic, Kruisbeek, Brenner, and Germain.

Brett, S. J., Cease, K. B., and Berzofsky, J. A. Influences of antigen processing on the expression of the T cell repertoire. Evidence for MHC-specific hindering structures on the products of processing. 357.

Briner, T. J. *See* Lai, Huang, Briner, Guillet, Smith, and Gefter.

Brinster, R. *See* Manz, Denis, Witte, Brinster, and Storb.

Brisson, E. *See* Salmon, Olivier, Riviere, Brisson, Gluckman, Kieny, Montagnier, and Klatzmann.

Britigan, B. E., Coffman, T. J., Adelberg, D. R., and Cohen, M. S. Mononuclear phagocytes have the potential for sustained hydroxyl radical production.Use of spin-trapping techniques to investigate mononuclear phagocyte free radical production. 2367.

Broder, S. *See* Perno, Yarchoan, Cooney, Hartman, Gartner, Popovic, Hao, Gerrard, Wilson, Johns, and Broder.

Brodeur, P. H., Osman, G. E., Mackle, J. J., and Lalor, T. M. The organization of the mouse *Igh-V* locus.Dispersion, interspersion, and the evolution of V_H gene family clusters. 2261.

— *See* Osman, Wortis, and Brodeur.

Broide, D. *See* Firestein, Xu, Townsend, Broide, Alvaro-Gracia, Glasebrook, and Zvaifler.

Brown, E. J. *See* Peters, Ambrus, Fauci, and Brown.

Brown, R. E. *See* Singh, Brown, and Roser.

Brownlee, G. *See* Townsend, Bastin, Gould, Brownlee, Andrew, Coupar, Boyle, Chan, and Smith.

Bruggemann, M. *See* Bindon, Hale, Bruggemann, and Waldmann.

Buerstedde, G. *See* Buerstedde, Pease, Nilson, Bell, Chase, Buerstedde, and McKean.

Buerstedde, J.-M., Pease, L. R., Nilson, A. E., Bell, M. P., Chase, C., Buerstedde, G., and McKean, D. J. Regulation of murine MHC class II molecule expression. Identification of $A\beta$ residues responsible for allele-specific cell surface expression. 823.

Buller, R. M. L. *See* Yetter, Buller, Lee, Elkins, Mosier, Fredrickson, and Morse.

Burakoff, S. J. *See* Bierer, Peterson, Gorga, Herrmann, and Burakoff.

Burastero, S. E., Casali, P., Wilder, R. L., and Notkins, A. L. Monoreactive high affinity and polyreactive low affinity rheumatoid factors are produced by $CD5^+$ B cells from patients with rheumatoid arthritis. 1979.

Burke, J. F. *See* Okusawa, Yancey, van der Meer, Endres, Lonnemann, Hefter, Frank, Burke, Dinarello, and Gelfand.

Bussolino, F. *See* Camussi, Tetta, Bussolino, and Baglioni.

C

Callanan, D. G. *See* Peeler, Callanan, Luckenbach, and Niederkorn.

Cameron, B. *See* Minota, Cameron, Welch, and Winfield.

Campanelli, D. *See* McGrogan, Simonsen, Scott, Griffith, Ellis, Kennedy, Campanelli, Nathan, and Gabay.

Camussi, G., Tetta, C., Bussolino, F., and Baglioni, C. Synthesis and release of platelet-activating factor is inhibited by plasma α_1-proteinase inhibitor or α_1-antichymotrypsin and is stimulated by proteinases. 1293.

Cann, H. *See* Font, Chen, Bories, Duparc, Loiseau, Degos, Cann, Cohen, Dausset, and Sigaux.

Cannon, M. J., Openshaw, P. J. M., and Askonas, B. A. Cytotoxic T cells clear virus but augment lung pathology in mice infected with respiratory syncytial virus. 1163.

Carroll, W. L., Starnes, C. O., Levy, R., and Levy, S. Alternative V_K gene rearrangements in a murine B cell lymphoma.An explanation for idiotypic heterogeneity. 1607.

Carson, D. A. *See* Silverman, Goñi, Fernandez, Chen, Frangione, and Carson.

Carter, D. M. *See* Gottlieb, Luster, Posnett, and Carter.

Casali, P. *See* Burastero, Casali, Wilder, and Notkins.

Casorati, G. *See* Moretta, Bottino, Ciccone, Tambussi, Mingari, Ferrini, Casorati, Varese, Viale, Migone, and Moretta.

Casten, L. A., Kaumaya, P., and Pierce, S. K. Enhanced T cell responses to antigenic peptides targeted to B cell surface immunoglobulin, Ia, or class I molecules. 171.

Cease, K. B. *See* Brett, Cease, and Berzofsky.

Cebrián, M., Yagüe, E., Rincón, M., López-Botet, M., de Landázuri, M. O., and Sánchez-Madrid, F. Triggering of T cell proliferation through AIM, an activation inducer molecule expressed on activated human lymphocytes. 1621.

Censini, S. *See* Boraschi, Nencioni, Villa, Censini, Bossu, Ghiara, Presentini, Perin, Frasca, Doria, Forni, Musso, Giovarelli, Ghezzi, Bertini, Besedovsky, Del Rey, Sipe, Antoni, Silvestri, and Tagliabue.

Cerami, A. *See* Sherry, Tekamp-Olson, Gallegos, Bauer, Davatelis, Wolpe, Masiarz, Coit, and Cerami.

Chaffee, S., Leeds, J. M., Matthews, T. J., Weinhold, K. J., Skinner, M., Bolognesi, D. P., and Hershfield, M. S. Phenotypic variation in the response to the human immunodeficiency virus among derivatives of the CEM T and WIL-2 B cell lines. 605.

Chan, S. *See* Townsend, Bastin, Gould, Brownlee, Andrew, Coupar, Boyle, Chan, and Smith.

Chang, H.-C. *See* Moingeon, Alcover, Clayton, Chang, Transy, and Reinherz.
Chase, C. *See* Buerstedde, Pease, Nilson, Bell, Chase, Buerstedde, and McKean.
Chen, P. P. *See* Silverman, Goñi, Fernandez, Chen, Frangione, and Carson.
Chen, W. *See* Sung, Jung, Walters, Chen, Wang, and Fu.
Chen, Z. *See* Font, Chen, Bories, Duparc, Loiseau, Degos, Cann, Cohen, Dausset, and Sigaux.
Chesebro, B. *See* Miyazawa, Nishio, and Chesebro.
Chess, L. *See* Hochstenbach, Parker, McLean, Gieselmann, Band, Bank, Chess, Spits, Strominger, Seidman, and Brenner.
— *See* Okada, Bank, Rogozinski, Takihara, Mak, Chess, and Alt.
Chin, K. N. *See* Morley, Chin, Newton, and Weiss.
Cholin, S. *See* Strang, Cholin, Spragg, Davis, Schneeberger, Donaldson, and Rosen.
Christiansen, F. T. *See* Tokunaga, Saueracker, Kay, Christiansen, Anand, and Dawkins.
Chused, T. M. *See* Ishida and Chused.
Ciccone, E., Ferrini, S., Bottino, C., Viale, O., Prigione, I., Pantaleo, G., Tambussi, G., Moretta, A., and Moretta, L. A monoclonal antibody specific for a common determinant of the human T cell receptor γ/δ directly activates $CD3^+WT31^-$ lymphocytes to express their functional program(s). 1.
—, **Viale, O., Pende, D., Malnati, M., Biassoni, R., Melioli, G., Moretta, A., Long, E. O., and Moretta, L.** Specific lysis of allogeneic cells after activation of $CD3^-$ lymphocytes in mixed lymphocyte culture. 2403.
— *See* Bottino, Tambussi, Ferrini, Ciccone, Varese, Mingari, Moretta, and Moretta.
— *See* Moretta, Bottino, Ciccone, Tambussi, Mingari, Ferrini, Casorati, Varese, Viale, Migone, and Moretta.
Clark, S. C. *See* Hoang, Haman, Goncalves, Letendre, Mathieu, Wong, and Clark.
Clausen, H. *See* Tsuji, Clausen, Nudelman, Kaizu, Hakomori, and Isojima.
Clayton, L. K. *See* Moingeon, Alcover, Clayton, Chang, Transy, and Reinherz.
Coffman, R. L. *See* Lebman and Coffman.
— *See* Scott, Natovitz, Coffman, Pearce, and Sher.
Coffman, R. *See* Rothman, Lutzker, Cook, Coffman, and Alt.
Coffman, T. J. *See* Britigan, Coffman, Adelberg, and Cohen.
Cohen, D. *See* Font, Chen, Bories, Duparc, Loiseau, Degos, Cann, Cohen, Dausset, and Sigaux.
Cohen, M. S. *See* Britigan, Coffman, Adelberg, and Cohen.
Cohn, Z. A., and Steinman, R. M. The immunological and infectious sequelae of the acquired immune deficiency syndrome. 2415.
— *See* Hancock, Kaplan, and Cohn.
— *See* Kaplan, Laal, Sheftel, Nusrat, Nath, Mathur, Mishra, and Cohn.
— *See* Nusrat, Wright, Aderem, Steinman, and Cohn.
— *See* Pawlowski, Kaplan, Abraham, and Cohn.
Coit, D. *See* Sherry, Tekamp-Olson, Gallegos, Bauer, Davatelis, Wolpe, Masiarz, Coit, and Cerami.
Coligan, J. E. *See* Hogan, Shimojo, Walk, Engelhard, Maloy, Coligan, and Biddison.
— *See* Matis, Ezquerra, and Coligan.
Connolly, J. M., Potter, T. A., Wormstall, E.-M., and Hansen, T. H. The Lyt-2 molecule recognizes residues in the class I $\alpha 3$ domain in allogeneic cytotoxic T cell responses. 325.
Conradt, P. *See* Kabelitz and Conradt.
Cook, W. *See* Rothman, Lutzker, Cook, Coffman, and Alt.
Cooney, D. A. *See* Perno, Yarchoan, Cooney, Hartman, Gartner, Popovic, Hao, Gerrard, Wilson, Johns, and Broder.
Cooper, H. M., Corradin, G., and Paterson, Y. The Heme moiety of cytochrome *c* is an autoreactive Ir gene-restricted T cell epitope. 1127.
Cooper, N. R. *See* Mold, Bradt, Nemerow, and Cooper.
Corradin, G. *See* Cooper, Corradin, and Paterson.
Cotterman, M. *See* Bluestone, Cron, Cotterman, Houlden, and Matis.
Coupar, B. *See* Townsend, Bastin, Gould, Brownlee, Andrew, Coupar, Boyle, Chan, and Smith.
Couser, W. G. *See* Johnson, Couser, Alpers, Vissers, Schulze, and Klebanoff.
Coutelier, J.-P., Van Der Logt, J. T. M., Heessen, F. W. A., Vink, A., and Van Snick, J. Virally induced modulation of murine IgG antibody subclasses. 2373.
Cranage, M. P. *See* Borysiewicz, Hickling, Graham, Sinclair, Cranage, Smith, and Sissons.
Cremer, M. A. *See* Yoo, Kim, Stuart, Floyd, Olson, Cremer, and Kang.
Crocker, P. R. *See* Lee, Crocker, Westaby, Key, Mason, Gordon, and Weatherall.
Cron, R. Q. *See* Bluestone, Cron, Cotterman, Houlden, and Matis.
Cronin, M. E., Love, L. A., Miller, F. W., McClintock, P. R., and Plotz, P. H. The natural history of encephalomyocarditis virus-induced myositis and myocarditis in mice.Viral persistence demonstrated by in situ hybridization. 1639.
Crowe, B. A. *See* Achtman, Neibert, Crowe, Strittmatter, Kusecek, Weyse, Walsh, Slawig, Morelli, Moll, and Blake.
Crowley, M. *See* Inaba, Inaba, Kinashi, Tashiro, Witmer-Pack, Crowley, Kaplan, Valinsky, Romani, Ikehara, Muramatsu, Honjo, and Steinman.

D

Dausset, J. *See* Font, Chen, Bories, Duparc, Loiseau, Degos, Cann, Cohen, Dausset, and Sigaux.
Davatelis, G. *See* Sherry, Tekamp-Olson, Gallegos, Bauer, Davatelis, Wolpe, Masiarz, Coit, and Cerami.
Davidson, W. F., Pierce, J. H., Rudikoff, S., and Morse, H. C., III Relationships between B cell and myeloid differentiation.Studies with a B lymphocyte progenitor line, HAFTL-1. 389.
Davis, A. C. *See* Vogel, Davis, McKinney, McMillan, Martin, and Goodenow.
Davis, A. E., III *See* Strang, Cholin, Spragg, Davis, Schneeberger, Donaldson, and Rosen.

Dawkins, R. L. *See* Tokunaga, Saueracker, Kay, Christiansen, Anand, and Dawkins.
Debré, P. *See* Karray, DeFrance, Merle-Béral, Banchereau, Debré, and Galanaud.
Defrance, T., Vanbervliet, B., Aubry, J.-P., and Banchereau, J. Interleukin 4 inhibits the proliferation but not the differentiation of activated human B cells in response to interleukin 2. 1321.
DeFrance, T. *See* Karray, DeFrance, Merle-Béral, Banchereau, Debré, and Galanaud.
Degos, L. *See* Font, Chen, Bories, Duparc, Loiseau, Degos, Cann, Cohen, Dausset, and Sigaux.
de la Hera, A. *See* Toribio, de la Hera, Borst, Marcos, Márquez, Alonso, Bárcena, and Martínez-A.
de Landázuri, M. O. *See* Cebrián, Yagüe, Rincón, López-Botet, de Landázuri, and Sánchez-Madrid.
Del Rey, A. *See* Boraschi, Nencioni, Villa, Censini, Bossu, Ghiara, Presentini, Perin, Frasca, Doria, Fuu
De Magistris, M. T., Romano, M., Nuti, S., Rappuoli, R., and Tagliabue, A. Dissecting human T cell responses against *Bordetella* species. 1351.
Denis, K. *See* Manz, Denis, Witte, Brinster, and Storb.
Denning, S. M. *See* Yang, Denning, Mizuno, Dupont, and Haynes.
De Vries, J. E. *See* Roncarolo, Yssel, Touraine, Bacchetta, Gebuhrer, De Vries, and Spits.
DeWaal, R. *See* Nawroth, Handley, Matsueda, DeWaal, Gerlach, Blohm, and Stern.
Dinarello, C. A. *See* Okusawa, Yancey, van der Meer, Endres, Lonnemann, Hefter, Frank, Burke, Dinarello, and Gelfand.
Donaldson, V. H. *See* Strang, Cholin, Spragg, Davis, Schneeberger, Donaldson, and Rosen.
Donelson, J. E. *See* Lucius, Erondu, Kern, and Donelson.
Doria, G. *See* Adorini, Appella, Doria, and Nagy.
— *See* Boraschi, Nencioni, Villa, Censini, Bossu, Ghiara, Presentini, Perin, Frasca, Doria, Forni, Musso, Giovarelli, Ghezzi, Bertini, Besedovsky, Del Rey, Sipe, Antoni, Silvestri, and Tagliabue.
Duparc, N. *See* Font, Chen, Bories, Duparc, Loiseau, Degos, Cann, Cohen, Dausset, and Sigaux.
Dupont, B. *See* Yang, Denning, Mizuno, Dupont, and Haynes.
Durum, S. *See* Harel-Bellan, Durum, Muegge, Abbas, and Farrar.

E

Elkins, K. L. *See* Yetter, Buller, Lee, Elkins, Mosier, Fredrickson, and Morse.
Ellingsworth, L. R. *See* Keller, Mantel, Sing, Ellingsworth, Ruscetti, and Ruscetti.
Ellingsworth, L. *See* Wahl, Hunt, Bansal, McCartney-Francis, Ellingsworth, and Allen.
Ellis, N. *See* McGrogan, Simonsen, Scott, Griffith, Ellis, Kennedy, Campanelli, Nathan, and Gabay.
Endres, S. *See* Okusawa, Yancey, van der Meer, Endres, Lonnemann, Hefter, Frank, Burke, Dinarello, and Gelfand.
Engelhard, V. H. *See* Bernhard, Le, Barbosa, Lacy, and Engelhard.
— *See* Hogan, Shimojo, Walk, Engelhard, Maloy, Coligan, and Biddison.
Erdei, A. *See* Ripoche, Mitchell, Erdei, Madin, Moffatt, Mokoena, Gordon, and Sim.
Erlich, H. *See* Mellins, Arp, Ochs, Erlich, and Pious.
Erondu, N. *See* Lucius, Erondu, Kern, and Donelson.
Ezquerra, A. *See* Matis, Ezquerra, and Coligan.

F

Falkenburg, J. H. F. *See* Voogt, Goulmy, Veenhof, Hamilton, Fibbe, Van Rood, and Falkenburg.
Falkow, S. *See* Ruehl, Marrs, Fernandez, Falkow, and Schoolnik.
Farina, P. R. *See* Rosenstreich, Tu, Kinkade, Maurer-Fogy, Kahn, Barton, and Farina.
Farrar, W. L. *See* Harel-Bellan, Durum, Muegge, Abbas, and Farrar.
Fauci, A. S. *See* Peters, Ambrus, Fauci, and Brown.
Fearon, D. T. *See* Klickstein, Bartow, Miletic, Rabson, Smith, and Fearon.
Ferguson, S. E., Rudikoff, S., and Osborne, B. A. Interaction and sequence diversity among T15 V_H genes in CBA/J mice. 1339.
Fernandez, J. *See* Silverman, Goñi, Fernandez, Chen, Frangione, and Carson.
Fernandez, R. *See* Oksenberg, Judd, Ko, Lim, Fernandez, Schoolnik, and Steinman.
— *See* Ruehl, Marrs, Fernandez, Falkow, and Schoolnik.
Fernandez-Botran, R., Sanders, V. M., Mosmann, T. R., and Vitetta, E. S. Lymphokine-mediated regulation of the proliferative response of clones of T helper 1 and T helper 2 cells. 543.
Ferrini, S. *See* Bottino, Tambussi, Ferrini, Ciccone, Varese, Mingari, Moretta, and Moretta.
— *See* Ciccone, Ferrini, Bottino, Viale, Prigione, Pantaleo, Tambussi, Moretta, and Moretta.
— *See* Moretta, Bottino, Ciccone, Tambussi, Mingari, Ferrini, Casorati, Varese, Viale, Migone, and Moretta.
— *See* Pantaleo, Zocchi, Ferrini, Poggi, Tambussi, Bottino, Moretta, and Moretta.
Fibbe, W. E. *See* Voogt, Goulmy, Veenhof, Hamilton, Fibbe, Van Rood, and Falkenburg.
Fillit, H. M., Blake, M., MacDonald, C., and McCarty, M. Immunogenicity of liposome-bound hyaluronate in mice. At least two different antigenic sites on hyaluronate are identified by mouse monoclonal antibodies. 971.
Firestein, G. S., Xu, W.-D., Townsend, K., Broide, D., Alvaro-Gracia, J., Glasebrook, A., and Zvaifler, N. J. Cytokines in chronic inflammatory arthritis. I. Failure to detect T cell lymphokines (interleukin 2 and interleukin 3) and presence of macrophage colony-stimulating factor (CSF-1) and a novel mast cell growth factor in rheumatoid synovitis. 1573.
Fleischer, B. *See* Schrezenmeier, Ahnert-Hilger, and Fleischer.
Floyd, R. A. *See* Yoo, Kim, Stuart, Floyd, Olson, Cremer, and Kang.

Font, M. P., Chen, Z., Bories, J. C., Duparc, N., Loiseau, P., Degos, L., Cann, H., Cohen, D., Dausset, J., and Sigaux, F. The Vγ locus of the human T cell receptor γ gene. Repertoire polymorphism of the first variable gene segment subgroup. 1383.

Fontana, A. *See* Frei, Leist, Meager, Gallo, Leppert, Zinkernagel, and Fontana.

Forman, J. *See* Mann, McLaughlin-Taylor, Wallace, and Forman.

Forni, G. *See* Boraschi, Nencioni, Villa, Censini, Bossu, Ghiara, Presentini, Perin, Frasca, Doria, Forni, Musso, Giovarelli, Ghezzi, Bertini, Besedovsky, Del Rey, Sipe, Antoni, Silvestri, and Tagliabue.

Fraker, D. L., Stovroff, M. C., Merino, M. J., and Norton, J. A. Tolerance to tumor necrosis factor in rats and the relationship to endotoxin tolerance and toxicity. 95.

Frangione, B. *See* Silverman, Goñi, Fernandez, Chen, Frangione, and Carson.

Frank, M. M. *See* Okusawa, Yancey, van der Meer, Endres, Lonnemann, Hefter, Frank, Burke, Dinarello, and Gelfand.

Frasca, D. *See* Boraschi, Nencioni, Villa, Censini, Bossu, Ghiara, Presentini, Perin, Frasca, Doria, Forni, Musso, Giovarelli, Ghezzi, Bertini, Besedovsky, Del Rey, Sipe, Antoni, Silvestri, and Tagliabue.

Fredrickson, T. N. *See* Yetter, Buller, Lee, Elkins, Mosier, Fredrickson, and Morse.

Frei, K., Leist, T. P., Meager, A., Gallo, P., Leppert, D., Zinkernagel, R. M., and Fontana, A. Production of B cell stimulatory factor 2 and interferon in the central nervous system during viral meningitis and encephalitis. Evaluation in a murine model infection and in patients. 449.

Fu, S. M. *See* Sung, Jung, Walters, Chen, Wang, and Fu.

Fung, M. R., Ju, G., and Greene, W. C. Co-internalization of the p55 and p70 subunits of the high affinity human interleukin 2 receptor. Evidence for a stable ternary receptor complex. 1923.

G

Gabay, J. *See* McGrogan, Simonsen, Scott, Griffith, Ellis, Kennedy, Campanelli, Nathan, and Gabay.

Galanaud, P. *See* Karray, DeFrance, Merle-Béral, Banchereau, Debré, and Galanaud.

Galili, N. *See* Bird, Galili, Link, Stites, and Sklar.

Gallegos, C. *See* Sherry, Tekamp-Olson, Gallegos, Bauer, Davatelis, Wolpe, Masiarz, Coit, and Cerami.

Gallo, P. *See* Frei, Leist, Meager, Gallo, Leppert, Zinkernagel, and Fontana.

Gamian, A. *See* Kabat, Liao, Osserman, Gamian, Michon, and Jennings.

Gartner, S. *See* Perno, Yarchoan, Cooney, Hartman, Gartner, Popovic, Hao, Gerrard, Wilson, Johns, and Broder.

Gebuhrer, L. *See* Roncarolo, Yssel, Touraine, Bacchetta, Gebuhrer, De Vries, and Spits.

Gefter, M. L. *See* Lai, Huang, Briner, Guillet, Smith, and Gefter.

Gelfand, J. A. *See* Okusawa, Yancey, van der Meer, Endres, Lonnemann, Hefter, Frank, Burke, Dinarello, and Gelfand.

Geliebter, J. *See* Hemmi, Geliebter, Zeff, Melvold, and Nathenson.

Georgatsou, E. *See* Benaroch, Georgatsou, and Bordenave.

Gerlach, H. *See* Nawroth, Handley, Matsueda, DeWaal, Gerlach, Blohm, and Stern.

Germain, R. N. *See* Saito, Hochstenbach, Marusic-Galesic, Kruisbeek, Brenner, and Germain.

Gerrard, T. L. *See* Perno, Yarchoan, Cooney, Hartman, Gartner, Popovic, Hao, Gerrard, Wilson, Johns, and Broder.

Ghezzi, P. *See* Boraschi, Nencioni, Villa, Censini, Bossu, Ghiara, Presentini, Perin, Frasca, Doria, Forni, Musso, Giovarelli, Ghezzi, Bertini, Besedovsky, Del Rey, Sipe, Antoni, Silvestri, and Tagliabue.

Ghiara, P. *See* Boraschi, Nencioni, Villa, Censini, Bossu, Ghiara, Presentini, Perin, Frasca, Doria, Forni, Musso, Giovarelli, Ghezzi, Bertini, Besedovsky, Del Rey, Sipe, Antoni, Silvestri, and Tagliabue.

Gieselmann, V. *See* Hochstenbach, Parker, McLean, Gieselmann, Band, Bank, Chess, Spits, Strominger, Seidman, and Brenner.

Gilly, M. *See* Sherr, Adelman, Saxon, Gilly, Wall, and Sidell.

Giovarelli, M. *See* Boraschi, Nencioni, Villa, Censini, Bossu, Ghiara, Presentini, Perin, Frasca, Doria, Forni, Musso, Giovarelli, Ghezzi, Bertini, Besedovsky, Del Rey, Sipe, Antoni, Silvestri, and Tagliabue.

Glasebrook, A. *See* Firestein, Xu, Townsend, Broide, Alvaro-Gracia, Glasebrook, and Zvaifler.

Gleich, G. J. *See* Barker, Gleich, and Pease.

Gluckman, J.-C *See* Salmon, Olivier, Riviere, Brisson, Gluckman, Kieny, Montagnier, and Klatzmann.

Goncalves, O. *See* Hoang, Haman, Goncalves, Letendre, Mathieu, Wong, and Clark.

Goñi, F. *See* Silverman, Goñi, Fernandez, Chen, Frangione, and Carson.

Goodenow, R. S. *See* Vogel, Davis, McKinney, McMillan, Martin, and Goodenow.

Gordon, S. *See* Lee, Crocker, Westaby, Key, Mason, Gordon, and Weatherall.

— *See* Ripoche, Mitchell, Erdei, Madin, Moffatt, Mokoena, Gordon, and Sim.

Gorga, J. C. *See* Bierer, Peterson, Gorga, Herrmann, and Burakoff.

Gorman, S. D. *See* Shiue, Gorman, and Parnes.

Gotch, F., McMichael, A., and Rothbard, J. Recognition of influenza A matrix protein by HLA-A2-restricted cytotoxic T lymphocytes. Use of analogues to orientate the matrix peptide in the HLA-A2 binding site. 2045.

Gotschlich, E. C. *See* Wetzler, Blake, and Gotschlich.

Gottlieb, A. B., Luster, A.D., Posnett, D. N., and Carter, D. M. Detection of a γ interferon–induced protein IP-10 in psoriatic plaques. 941.

Gould, K. *See* Townsend, Bastin, Gould, Brownlee, Andrew, Coupar, Boyle, Chan, and Smith.

Goulmy, E. *See* Voogt, Goulmy, Veenhof, Hamilton, Fibbe, Van Rood, and Falkenburg.

Graham, S. *See* Borysiewicz, Hickling, Graham, Sinclair, Cranage, Smith, and Sissons.

Granelli-Piperno, A. In situ hybridization for interleukin 2 and interleukin 2 receptor mRNA in T cells activated in the presence or absense of cyclosporin A. 1649.

Grau, G. E., Kindler, V., Piguet, P.-F., Lambert, P.-H., and Vassalli, P. Prevention of experimental cerebral malaria by anticytokine antibodies. Interleukin 3 and granulocyte/macrophage colony-stimulating factor are intermediates in increased tumor necrosis factor production and macrophage accumulation. 1499.

Greenberg, P. L. *See* Nagler, Greenberg, Lanier, and Phillips.

Greene, W. C. *See* Fung, Ju, and Greene.

Gresser, I., Maury, C., Vignaux, F., Haller, O., Belardelli, F., and Tovey, M. G. Antibody to mouse interferon α/β abrogates resistance to the multiplication of Friend erythroleukemia cells in the livers of allogeneic mice. 1271.

Griffiss, J. M. *See* Mandrell, Griffiss, and Macher.

Griffith, J. *See* McGrogan, Simonsen, Scott, Griffith, Ellis, Kennedy, Campanelli, Nathan, and Gabay.

Griffith, R. L., Virella, G. T., Stevenson, H. C., and Lopes-Virella, M. F. Low density lipoprotein metabolism by human macrophages activated with low density lipoprotein immune complexes.A possible mechanism of foam cell formation. 1041.

Gueguen, M., Meunier-Rotival, M., Bernard, O., and Alvarez, F. Anti-liver kidney microsome antibody recognizes a cytochrome P450 from the IID subfamily. 801.

Guillet, J.-G. *See* Lai, Huang, Briner, Guillet, Smith, and Gefter.

H

Haba, S., and Nisonoff, A. Immunological responsiveness of neonatal A/J mice to isotypic determinants of syngeneic IgE. 713.

Hakomori, S.-I. *See* Tsuji, Clausen, Nudelman, Kaizu, Hakomori, and Isojima.

Hale, G. *See* Bindon, Hale, Bruggemann, and Waldmann.

Hall, L. R. *See* Streuli, Krueger, Hall, Schlossman, and Saito.

Hall, R. H. *See* Herrington, Hall, Losonsky, Mekalanos, Taylor, and Levine.

Haller, O. *See* Gresser, Maury, Vignaux, Haller, Belardelli, and Tovey.

Haman, A. *See* Hoang, Haman, Goncalves, Letendre, Mathieu, Wong, and Clark.

Hambor, J. E., Tykocinski, M. L., and Kaplan, D. R. Functional consequences of antisense RNA-mediated inhibition of CD8 surface expression in a human T cell clone. 1237.

Hamilton, M. *See* Voogt, Goulmy, Veenhof, Hamilton, Fibbe, Van Rood, and Falkenburg.

Hancock, G. E., Kaplan, G., and Cohn, Z. A. Keratinocyte growth regulation by the products of immune cells. 1395.

Handley, D. *See* Nawroth, Handley, Matsueda, DeWaal, Gerlach, Blohm, and Stern.

Hansen, T. H. *See* Connolly, Potter, Wormstall, and Hansen.

— *See* Lee, Rubocki, Lie, and Hansen.

Hansson, G. C. *See* Tuomanen, Towbin, Rosenfelder, Braun, Larson, Hansson, and Hill.

Hao, Z. *See* Perno, Yarchoan, Cooney, Hartman, Gartner, Popovic, Hao, Gerrard, Wilson, Johns, and Broder.

Harada, N. *See* Mita, Harada, Naomi, Hitoshi, Sakamoto, Akagi, Tominaga, and Takatsu.

Hardy, R. R. *See* Hayakawa and Hardy.

Harel-Bellan, A., Durum, S., Muegge, K., Abbas, A. K., and Farrar, W. L. Specific inhibition of lymphokine biosynthesis and autocrine growth using antisense oligonucleotides in Th1 and Th2 helper T cell clones. 2309.

Hart, D. N. J., and McKenzie, J. L. Isolation and characterization of human tonsil dendritic cells. 157.

Hartman, N. R. *See* Perno, Yarchoan, Cooney, Hartman, Gartner, Popovic, Hao, Gerrard, Wilson, Johns, and Broder.

Haughton, G. *See* Mercolino, Arnold, Hawkins, and Haughton.

Hawkins, L. A. *See* Mercolino, Arnold, Hawkins, and Haughton.

Hayakawa, K., and Hardy, R. R. Murine $CD4^+$ T cell subsets defined. 1825.

Haynes, B. F., Martin, M. E., Kay, H. H., and Kurtzberg, J. Early events in human T cell ontogeny. Phenotypic characterization and immunohistologic localization of T cell precursors in early human fetal tissues. 1061.

— *See* Yang, Denning, Mizuno, Dupont, and Haynes.

Heber-Katz, E. *See* Owhashi and Heber-Katz.

Heessen, F. W. A. *See* Coutelier, Van Der Logt, Heessen, Vink, and Van Snick.

Hefter, K. *See* Okusawa, Yancey, van der Meer, Endres, Lonnemann, Hefter, Frank, Burke, Dinarello, and Gelfand.

Hemmi, S., Geliebter, J., Zeff, R. A., Melvold, R. W., and Nathenson, S. G. Three spontaneous $H\text{-}2D^b$ mutants are generated by genetic microrecombination (gene conversion) events. Impact on the H-2-restricted immune responsiveness. 2319.

Hengartner, H. *See* Zinkernagel, Rüedi, Althage, Hengartner, and Reimann.

Herrington, D. A., Hall, R. H., Losonsky, G., Mekalanos, J. J., Taylor, R. K., and Levine, M. M. Toxin, toxin-coregulated pili, and *ToxR* regulon are essential for *Vibrio cholerae* pathogenesis in humans. 1487.

Herrmann, S. H. *See* Bierer, Peterson, Gorga, Herrmann, and Burakoff.

Herron, L. R. *See* Kotzin, Babcock, and Herron.

Hershfield, M. S. *See* Chaffee, Leeds, Matthews, Weinhold, Skinner, Bolognesi, and Hershfield.

Hershko, C., and Peto, T. E. A. Deferoxamine inhibition of malaria is independent of host iron status. 375.

Hickling, J. K. *See* Borysiewicz, Hickling, Graham, Sinclair, Cranage, Smith, and Sissons.

Hill, R. *See* Tuomanen, Towbin, Rosenfelder, Braun, Larson, Hansson, and Hill.

Hirayama, Y., Inaba, K., Inaba, M., Kato, T., Kitaura, M., Hosokawa, T., Ikehara, S., and Muramatsu, S. Neuraminidase-treated macrophages stimulate allogenic $CD8^+$ T cells in the presence of exogenous interleukin 2. 1443.

Hitoshi, Y. *See* Mita, Harada, Naomi, Hitoshi, Sakamoto, Akagi, Tominaga, and Takatsu.

Hoang, T., Haman, A., Goncalves, O., Letendre, F., Mathieu, M., Wong, G. G., and Clark, S. C. Interleukin 1 enhances growth factor–dependent proliferation of the clonogenic cells in acute myeloblastic leukemia and of normal human primitive hemopoietic precursors. 463.

Hochstenbach, F., Parker, C., McLean, J., Gieselmann, V., Band, H., Bank, I., Chess, L., Spits, H., Strominger, J. L., Seidman, J. G., and Brenner, M. B. Characterization of a third form of the human T cell receptor γ/δ. 761.

— *See* Saito, Hochstenbach, Marusic-Galesic, Kruisbeek, Brenner, and Germain.

Hogan, K. T., Shimojo, N., Walk, S. F., Engelhard, V. H., Maloy, W. L., Coligan, J. E., and Biddison, W. E. Mutations in the $\alpha 2$ helix of HLA-A2 affect presentation but do not inhibit binding of influenza virus matrix peptide. 725.

Höglund, P., Ljunggren, H.-G., Öhlén, C., Ährlund-Richter, L., Scangos, G., Bieberich, C., Jay, G., Klein, G., and Kärre, K. Natural resistance against lymphoma grafts conveyed by $H\text{-}2D^d$ transgene to C57BL mice. 1469.

Holers, V. M. *See* Hourcade, Miesner, Atkinson, and Holers.

Honjo, T. *See* Inaba, Inaba, Kinashi, Tashiro, Witmer-Pack, Crowley, Kaplan, Valinsky, Romani, Ikehara, Muramatsu, Honjo, and Steinman.

— *See* Saito, Sabe, Suzuki, Kondo, Ogura, Shimizu, and Honjo.

Hood, L. *See* Kono, Urban, Horvath, Ando, Saavedra, and Hood.

Horvath, S. J. *See* Kono, Urban, Horvath, Ando, Saavedra, and Hood.

Hosokawa, T. *See* Hirayama, Inaba, Inaba, Kato, Kitaura, Hosokawa, Ikehara, and Muramatsu.

Houlden, B. A. *See* Bluestone, Cron, Cotterman, Houlden, and Matis.

Hourcade, D., Miesner, D. R., Atkinson, J. P., and Holers, V. M. Identification of an alternative polyadenylation site in the human C3b/C4b receptor (complement receptor type 1) transcriptional unit and prediction of a secreted form of complement receptor type 1. 1255.

Hrushesky, W. J. M. *See* Ratajczak, Sothern, and Hrushesky.

Huang, J. I. H. *See* North, Neubauer, Huang, Newton, and Loveless.

Huang, S.-Y. *See* Lai, Huang, Briner, Guillet, Smith, and Gefter.

Hugo, F. *See* Bhakdi, Muhly, Mannhardt, Hugo, Klapettek, Mueller-Eckhardt, and Roka.

Hunt, D. A. *See* Wahl, Hunt, Bansal, McCartney-Francis, Ellingsworth, and Allen.

Hurley, E. A., and Thorley-Lawson, D. A. B cell activation and the establishment of Epstein-Barr virus latency. 2059.

I

Ikeda, H., Taguchi, O., Takahashi, T., Itoh, G., and Nishizuka, Y. L3T4 effector cells in multiple organ–localized autoimmune disease in nude mice grafted with embryonic rat thymus. 2397.

Ikehara, S. *See* Hirayama, Inaba, Inaba, Kato, Kitaura, Hosokawa, Ikehara, and Muramatsu.

— *See* Inaba, Inaba, Kinashi, Tashiro, Witmer-Pack, Crowley, Kaplan, Valinsky, Romani, Ikehara, Muramatsu, Honjo, and Steinman.

— *See* Miyama-Inaba, Kuma, Inaba, Ogata, Iwai, Yasumizu, Muramatsu, Steinman, and Ikehara.

Inaba, K., Inaba, M., Kinashi, T., Tashiro, K., Witmer-Pack, M., Crowley, M., Kaplan, G., Valinsky, J., Romani, N., Ikehara, S., Muramatsu, S., Honjo, T., and Steinman, R. M. Macrophages phagocytose thymic lymphocytes with productively rearranged T cell receptor α and β genes. 2279.

— *See* Hirayama, Inaba, Inaba, Kato, Kitaura, Hosokawa, Ikehara, and Muramatsu.

— *See* Miyama-Inaba, Kuma, Inaba, Ogata, Iwai, Yasumizu, Muramatsu, Steinman, and Ikehara.

— *See* Puré, Inaba, and Metlay.

Inaba, M. *See* Hirayama, Inaba, Inaba, Kato, Kitaura, Hosokawa, Ikehara, and Muramatsu.

— *See* Inaba, Inaba, Kinashi, Tashiro, Witmer-Pack, Crowley, Kaplan, Valinsky, Romani, Ikehara, Muramatsu, Honjo, and Steinman.

Isakson, P. C. *See* Purkerson, Newberg, Wise, Lynch, and Isakson.

Ishida, Y., and Chused, T. M. Heterogeneity of lymphocyte calcium metabolism is caused by T cell–specific calcium-sensitive potassium channel and sensitivity of the calcium ATPase pump to membrane potential. 839.

Ishiguro, A. *See* Koike, Nakahata, Takagi, Kobayashi, Ishiguro, Tsuji, Naganuma, Okano, Akiyama, and Akabane.

Isojima, S. *See* Tsuji, Clausen, Nudelman, Kaizu, Hakomori, and Isojima.

Itoh, G. *See* Ikeda, Taguchi, Takahashi, Itoh, and Nishizuka.

Itoh, K., Platsoucas, C. D., and Balch, C. M. Autologous tumor-specific cytotoxic T lymphocytes in the infiltrate of human metastatic melanomas. Activation by interleukin 2 and autologous tumor cells, and involvement of the T cell receptor. 1419.

Iwai, H. *See* Miyama-Inaba, Kuma, Inaba, Ogata, Iwai, Yasumizu, Muramatsu, Steinman, and Ikehara.

J

Janda, I. *See* Schultheiss, Kühl, Janda, Melzner, Ulrich, and Morad.

Jay, G. *See* Höglund, Ljunggren, Öhlén, Ährlund-Richter, Scangos, Bieberich, Jay, Klein, and Kärre.

Jennings, H. J. *See* Kabat, Liao, Osserman, Gamian, Michon, and Jennings.

Jeong, H. D., and Teale, J. M. Comparison of the fetal and adult functional B cell repertoires by analysis of V_H gene family expression. 589.

Jiang, S., Persechini, P. M., Zychlinsky, A., Liu, C.-C., Perussia, B., and Young, J. D.-E. Resistance of cytolytic lymphocytes to perforin-mediated killing. Lack of correlation with complement-associated homologous species restriction. 2207.

Jin, Y., Shih, J. W.-K., and Berkower, I. Human T cell response to the surface antigen of hepatitis B (HBsAg).Endosomal and nonendosomal processing pathways are accessible to both endogenous and exogenous antigen. 293.

Johns, D. G. *See* Perno, Yarchoan, Cooney, Hartman, Gartner, Popovic, Hao, Gerrard, Wilson, Johns, and Broder.

Johnson, R. J., Couser, W. G., Alpers, C. E., Vissers, M., Schulze, M., and Klebanoff, S. J. The human neutrophil serine proteinases, elastase and cathepsin G, can mediate glomerular injury in vivo. 1169.

Jongeneel, C. V. *See* Letarte, Vera, Tran, Addis, Onizuka, Quackenbush, Jongeneel, and McInnes.

Ju, G. *See* Fung, Ju, and Greene.

Judd, A. K. *See* Oksenberg, Judd, Ko, Lim, Fernandez, Schoolnik, and Steinman.

Jung, L. K. L. *See* Sung, Jung, Walters, Chen, Wang, and Fu.

K

Kabat, E. A., Liao, J., Osserman, E. F., Gamian, A., Michon, F., and Jennings, H. J. The epitope associated with the binding of the capsular polysaccharide of the group B meningococcus and of *Escherichia coli* K1 to a human monoclonal macroglobulin, IgM^{NOV}. 699.

— *See* Wallick, Kabat, and Morrison.

Kabelitz, D., and Conradt, P. Identification of $CD2^-/CD3^+$ T cells in fetal human tissue. 1941.

Kahn, J. *See* Rosenstreich, Tu, Kinkade, Maurer-Fogy, Kahn, Barton, and Farina.

Kaizu, T. *See* Tsuji, Clausen, Nudelman, Kaizu, Hakomori, and Isojima.

Kale Ab, B. K. *See* Ottenhoff, Kale Ab, Van Embden, Thole, and Keissling.

Kang, A. H. *See* Yoo, Kim, Stuart, Floyd, Olson, Cremer, and Kang.

Kaplan, D. R. *See* Hambor, Tykocinski, and Kaplan.

Kaplan, G., Laal, S., Sheftel, G., Nusrat, A., Nath, I., Mathur, N. K., Mishra, R. S., and Cohn, Z. A. The nature and kinetics of a delayed immune response to purified protein derivative of tuberculin in the skin of lepromatous leprosy patients. 1811.

— *See* Hancock, Kaplan, and Cohn.

— *See* Inaba, Inaba, Kinashi, Tashiro, Witmer-Pack, Crowley, Kaplan, Valinsky, Romani, Ikehara, Muramatsu, Honjo, and Steinman.

— *See* Pawlowski, Kaplan, Abraham, and Cohn.

Karray, S., DeFrance, T., Merle-Béral, H., Banchereau, J., Debré, P., and Galanaud, P. Interleukin 4 counteracts the interleukin 2-induced proliferation of monoclonal B cells. 85.

Kärre, K. *See* Höglund, Ljunggren, Öhlén, Ährlund-Richter, Scangos, Bieberich, Jay, Klein, and Kärre.

Kato, T. *See* Hirayama, Inaba, Inaba, Kato, Kitaura, Hosokawa, Ikehara, and Muramatsu.

Katz, D. H. *See* Richards, Marcelletti, and Katz.

Katz, J. D., Ohnishi, K., Lebow, L. T., and Bonavida, B. The SJL/J T cell response to both spontaneous and transplantable syngeneic reticulum cell sarcoma is mediated predominantly by the $V\beta17a^+$ T cell clonotype. 1553.

Kaumaya, P. *See* Casten, Kaumaya, and Pierce.

Kawakami, Y., Rosenberg, S. A., and Lotze, M. T. Interleukin 4 promotes the growth of tumor-infiltrating lymphocytes cytotoxic for human autologous melanoma. 2183.

Kawanishi, M. *See* Seto, Kawanishi, Matsuda, and Ogawa.

Kay, H. H. *See* Haynes, Martin, Kay, and Kurtzberg.

Kay, P. H. *See* Tokunaga, Saueracker, Kay, Christiansen, Anand, and Dawkins.

Kehoe, M. A. *See* Poirier, Kehoe, and Beachey.

Keller, J. R., Mantel, C., Sing, G. K., Ellingsworth, L. R., Ruscetti, S. K., and Ruscetti, F. W. Transforming growth factor $\beta1$ selectively regulates early murine hematopoietic progenitors and inhibits the growth of IL-3-dependent myeloid leukemia cell lines. 737.

Kennedy, J. *See* McGrogan, Simonsen, Scott, Griffith, Ellis, Kennedy, Campanelli, Nathan, and Gabay.

Kern, A. *See* Lucius, Erondu, Kern, and Donelson.

Kestler, D. *See* Kwon, Kestler, Lee, Wakulchik, and Young.

Key, N. *See* Lee, Crocker, Westaby, Key, Mason, Gordon, and Weatherall.

Kieny, M.-P. *See* Salmon, Olivier, Riviere, Brisson, Gluckman, Kieny, Montagnier, and Klatzmann.

Kiessling, R. *See* Ottenhoff, Kale Ab, Van Embden, Thole, and Kiessling.

Kim, S.-Y. *See* Yoo, Kim, Stuart, Floyd, Olson, Cremer, and Kang.

Kinashi, T. *See* Inaba, Inaba, Kinashi, Tashiro, Witmer-Pack, Crowley, Kaplan, Valinsky, Romani, Ikehara, Muramatsu, Honjo, and Steinman.

Kindler, V. *See* Grau, Kindler, Piguet, Lambert, and Vassalli.

Kinkade, P. R. *See* Rosenstreich, Tu, Kinkade, Maurer-Fogy, Kahn, Barton, and Farina.

Kirkpatrick, E. A. *See* Michie, Kirkpatrick, and Rouse.

Kitaura, M. *See* Hirayama, Inaba, Inaba, Kato, Kitaura, Hosokawa, Ikehara, and Muramatsu.

Kiyohara, T., Taniguchi, K., Kubota, S., Koga, S., Sakuragi, T., and Saitoh, Y. Induction of lymphokine-activated killer-like cells by cancer chemotherapy. 2355.

Klapettek, K. *See* Bhakdi, Muhly, Mannhardt, Hugo, Klapettek, Mueller-Eckhardt, and Roka.

Klatzmann, D. *See* Salmon, Olivier, Riviere, Brisson, Gluckman, Kieny, Montagnier, and Klatzmann.

Klebanoff, S. J. *See* Johnson, Couser, Alpers, Vissers, Schulze, and Klebanoff.

Klein, G. *See* Höglund, Ljunggren, Öhlén, Ährlund-Richter, Scangos, Bieberich, Jay, klein, and Kärre.

Klickstein, L. B., Bartow, T. J., Miletic, V., Rabson, L. D., Smith, J. A., and Fearon, D. T. Identification of distinct C3b and C4b recognition sites in the human C3b/C4b receptor (CR1, CD35) by deletion mutagenesis. 1699.

Ko, C. *See* Oksenberg, Judd, Ko, Lim, Fernandez, Schoolnik, and Steinman.

Kobayashi, T. *See* Koike, Nakahata, Takagi, Kobayashi, Ishiguro, Tsuji, Naganuma, Okano, Akiyama, and Akabane.

Koga, S. *See* Kiyohara, Taniguchi, Kubota, Koga, Sakuragi, and Saitoh.

Koide, S., and Steinman, R. M. Induction of interleukin 1α mRNA during the antigen-dependent interaction of sensitized T lymphoblasts with macrophages. 409.

Koike, K., Nakahata, T., Takagi, M., Kobayashi, T., Ishiguro, A., Tsuji, K., Naganuma, K., Okano, A., Akiyama, Y., and Akabane, T. Synergism of BSF-2/interleukin 6 and interleukin 3 on development of multipotential hemopoietic progenitors in serum-free culture. 879.

Kokkelink, I. *See* Rotteveel, Kokkelink, Van Lier, Kuenen, Meager, Miedema, and Lucas.

Kon, S. *See* Levy, Mendel, Kon, Avnur, and Levy.

Kondo, S. *See* Saito, Sabe, Suzuki, Kondo, Ogura, Shimizu, and Honjo.

Kono, D. H., Urban, J. L., Horvath, S. J., Ando, D. G., Saavedra, R. A., and Hood, L. Two minor determinants of myelin basic protein induce experimental allergic encephalomyelitis in SJL/J mice. 213.

Korman, A. J., Marusic-Galesic, S., Spencer, D., Kruisbeek, A. M., and Raulet, D. H. Predominant variable region gene usage by γ/δ T cell receptor–bearing cells in the adult thymus. 1021.

Kotzin, B. L., Babcock, S. K., and Herron, L. R. Deletion of potentially self-reactive T cell receptor specificities in L3T4$^-$, Lyt-2$^-$ T cells of *lpr* mice. 2221.

Krueger, N. X. *See* Streuli, Krueger, Hall, Schlossman, and Saito.

Kruisbeek, A. M. *See* Korman, Marusic-Galesic, Spencer, Kruisbeek, and Raulet.

— *See* Mizuochi, Tentori, Sharrow, Kruisbeek, and Singer.

— *See* Saito, Hochstenbach, Marusic-Galesic, Kruisbeek, Brenner, and Germain.

— *See* Tentori, Longo, Zuñiga-Pflucker, Wing, and Kruisbeek.

Kruithof, E. K. O. *See* Medcalf, Kruithof, and Schleuning.

Kubota, S. *See* Kiyohara, Taniguchi, Kubota, Koga, Sakuragi, and Saitoh.

Kuenen, B. *See* Rotteveel, Kokkelink, Van Lier, Kuenen, Meager, Miedema, and Lucas.

Kühl, U. *See* Schultheiss, Kühl, Janda, Melzner, Ulrich, and Morad.

Kuma, S.-I. *See* Miyama-Inaba, Kuma, Inaba, Ogata, Iwai, Yasumizu, Muramatsu, Steinman, and Ikehara.

Kurtzberg, J. *See* Haynes, Martin, Kay, and Kurtzberg.

Kusecek, B. *See* Achtman, Neibert, Crowe, Strittmatter, Kusecek, Weyse, Walsh, Slawig, Morelli, Moll, and Blake.

Kwon, B. S., Kestler, D., Lee, E., Wakulchik, M., and Young, J. D.-E. Isolation and sequence analysis of serine protease cDNAs from mouse cytolytic T lymphocytes. 1839.

L

Laal, S. *See* Kaplan, Laal, Sheftel, Nusrat, Nath, Mathur, Mishra, and Cohn.

Lacy, E. *See* Bernhard, Le, Barbosa, Lacy, and Engelhard.

Lai, M.-Z., Huang, S.-Y., Briner, T. J., Guillet, J.-G., Smith, J. A., and Gefter, M. L. T cell receptor gene usage in the response to λ repressor cI protein. An apparent bias in the usage of a Vα gene element. 1081.

Lalor, T. M. *See* Brodeur, Osman, Mackle, and Lalor.

Lambert, P.-H. *See* Grau, Kindler, Piguet, Lambert, and Vassalli.

Lanier, L. L. *See* Nagler, Greenberg, Lanier, and Phillips.

Larson, G. *See* Tuomanen, Towbin, Rosenfelder, Braun, Larson, Hansson, and Hill.

Le, A.-X. T. *See* Bernhard, Le, Barbosa, Lacy, and Engelhard.

Le Beau, M. M. *See* Lublin, Liszewski, Post, Arce, Le Beau, Rebentisch, Lemons, Seya, and Atkinson.

Lebman, D. A., and Coffman, R. L. Interleukin 4 causes isotype switching to IgE in T cell–stimulated clonal B cell cultures. 853.

Lebow, L. T. *See* Katz, Ohnishi, Lebow, and Bonavida.

Lee, D. R., Rubocki, R. J., Lie, W.-R., and Hansen, T. H. The murine MHC class I genes, *H-2D^q* and *H-2L^q*, are strikingly homologous to each other, *H-2L^d*, and two genes reported to encode tumor-specific antigens. 1719.

Lee, E. *See* Kwon, Kestler, Lee, Wakulchik, and Young.

Lee, J. S. *See* Yetter, Buller, Lee, Elkins, Mosier, Fredrickson, and Morse.

Lee, S. H., Crocker, P. R., Westaby, S., Key, N., Mason, D. Y., Gordon, S., and Weatherall, D. J. Isolation and immunocytochemical characterization of human bone marrow stromal macrophages in hemopoietic clusters. 1193.

Leech, J. *See* Magowan, Wollish, Anderson, and Leech.

Leeds, J. M. *See* Chaffee, Leeds, Matthews, Weinhold, Skinner, Bolognesi, and Hershfield.

Leist, T. P. *See* Frei, Leist, Meager, Gallo, Leppert, Zinkernagel, and Fontana.

Lemons, R. S. *See* Lublin, Liszewski, Post, Arce, Le Beau, Rebentisch, Lemons, Seya, and Atkinson.

Leppert, D. *See* Frei, Leist, Meager, Gallo, Leppert, Zinkernagel, and Fontana.

Letarte, M., Vera, S., Tran, R., Addis, J. B. L., Onizuka, R. J., Quackenbush, E. J., Jongeneel, C. V., and McInnes, R. R. Common acute lymphocytic leukemia antigen is identical to neutral endopeptidase. 1247.

Letendre, F. *See* Hoang, Haman, Goncalves, Letendre, Mathieu, Wong, and Clark.

Levine, M. M. *See* Herrington, Hall, Losonsky, Mekalanos, Taylor, and Levine.

Levy, R. *See* Carroll, Starnes, Levy, and Levy.

— *See* Levy, Mendel, Kon, Avnur, and Levy.

Levy, S., Mendel, E., Kon, S., Avnur, Z., and Levy, R. Mutational hot spots in Ig V region genes of human follicular lymphomas. 475.

— *See* Carroll, Starnes, Levy, and Levy.

Lewicki, H. *See* Oldstone, Whitton, Lewicki, and Tishon.

Ley, V., Andrews, N. W., Robbins, E. S., and Nussenzweig, V. Amastigotes of *Trypanosoma cruzi* sustain an infective cycle in mammalian cells. 649.

Liao, J. *See* Kabat, Liao, Osserman, Gamian, Michon, and Jennings.

Lie, W.-R. *See* Lee, Rubocki, Lie, and Hansen.

Lim, M. *See* Oksenberg, Judd, Ko, Lim, Fernandez, Schoolnik, and Steinman.

Lim, S. M. L., and White, D. J. G. Long-term residence of a graft is an insufficient stimulus for the induction of tolerance. Investigating the role of cyclosporine in class I–disparate heart grafts in the rat. 807.

Link, M. *See* Bird, Galili, Link, Stites, and Sklar.

Lint, T. F. *See* Rothstein, Lint, and Schreiber.

Liszewski, M. K. *See* Lublin, Liszewski, Post, Arce, Le Beau, Rebentisch, Lemons, Seya, and Atkinson.

Liu, C.-C. *See* Jiang, Persechini, Zychlinsky, Liu, Perussia, and Young.

Ljunggren, H.-G. *See* Höglund, Ljunggren, Ohlén, Ahrlund-Richter, Scangos, Bieberich, Jay, Klein, and Kärre.

Loiseau, P. *See* Font, Chen, Bories, Duparc, Loiseau, Degos, Cann, Cohen, Dausset, and Sigaux.

Long, E. O. *See* Ciccone, Viale, Pende, Malnati, Biassoni, Melioli, Moretta, Long, and Moretta.

Longo, D. L. *See* Tentori, Longo, Zuñiga-Pflucker, Wing, and Kruisbeek.

Lonnemann, G. *See* Okusawa, Yancey, van der Meer, Endres, Lonnemann, Hefter, Frank, Burke, Dinarello, and Gelfand.

Lopes-Virella, M. F. *See* Griffith, Virella, Stevenson, and Lopes-Virella.

López-Botet, M. *See* Cebrián, Yagüe, Rincón, López-Botet, de Landázuri, and Sánchez-Madrid.

Losonsky, G. *See* Herrington, Hall, Losonsky, Mekalanos, Taylor, and Levine.

Lotze, M. T. *See* Kawakami, Rosenberg, and Lotze.

Love, L. A. *See* Cronin, Love, Miller, McClintock, and Plotz.

Loveless, S. E. *See* North, Neubauer, Huang, Newton, and Loveless.

Lublin, D. M., Liszewski, M. K., Post, T. W., Arce, M. A., Le Beau, M. M., Rebentisch, M. B., Lemons, R. S., Seya, T., and Atkinson, J. P. Molecular cloning and chromosomal localization of human membrane cofactor protein (MCP). Evidence for inclusion in the multigene family of complement-regulatory proteins. 181.

Lucas, C. J. *See* Rotteveel, Kokkelink, Van Lier, Kuenen, Meager, Miedema, and Lucas.

Lucius, R., Erondu, N., Kern, A., and Donelson, J. E. Molecular cloning of an immunodominant antigen of *Onchocerca volvulus*. 1199.

Luckenbach, M. W. *See* Peeler, Callanan, Luckenbach, and Niederkorn.

Luster, A.D. *See* Gottlieb, Luster, Posnett, and Carter.

Lutzker, S. *See* Rothman, Lutzker, Cook, Coffman, and Alt.

Lynch, K. R. *See* Purkerson, Newberg, Wise, Lynch, and Isakson.

M

MacDonald, C. *See* Fillit, Blake, MacDonald, and McCarty.

Macher, B. A. *See* Mandrell, Griffiss, and Macher.

Mackle, J. J. *See* Brodeur, Osman, Mackle, and Lalor.

Madin, C. *See* Ripoche, Mitchell, Erdei, Madin, Moffatt, Mokoena, Gordon, and Sim.

Magilavy, D. B., and Rothstein, J. L. Spontaneous production of tumor necrosis factor α by Kupffer cells of MRL/lpr mice. 789.

Magowan, C., Wollish, W., Anderson, L., and Leech, J. Cytoadherence by *Plasmodium falciparum*–infected erythrocytes is correlated with the expression of a family of variable proteins on infected erythrocytes. 1307.

Mak, T. W. *See* Okada, Bank, Rogozinski, Takihara, Mak, Chess, and Alt.

Malnati, M. *See* Ciccone, Viale, Pende, Malnati, Biassoni, Melioli, Moretta, Long, and Moretta.

Maloney, G. *See* Raff, Siscoe, Wolff, Maloney, and Shuford.

Maloy, W. L. *See* Hogan, Shimojo, Walk, Engelhard, Maloy, Coligan, and Biddison.

Malynn, B. A. *See* Yancopoulos, Malynn, and Alt.

Mandrell, R. E., Griffiss, J. M., and Macher, B. A. Lipooligosaccharides (LOS) of *Neisseria gonorrhoeae* and *Neisseria meningitidis* have components that are immunochemically similar to precursors of human blood group antigens. Carbohydrate sequence specificity of the mouse monoclonal antibodies that recognize crossreacting antigens on LOS and human erythrocytes. 107.

Mann, D. W., McLaughlin-Taylor, E., Wallace, R. B., and Forman, J. An immunodominant epitope present in multiple class I MHC molecules and recognized by cytotoxic T lymphocytes. 307.

Mannhardt, U. *See* Bhakdi, Muhly, Mannhardt, Hugo, Klapettek, Mueller-Eckhardt, and Roka.

Mantel, C. *See* Keller, Mantel, Sing, Ellingsworth, Ruscetti, and Ruscetti.

Manz, J., Denis, K., Witte, O., Brinster, R., and Storb, U. Feedback inhibition of immunoglobulin gene rearrangement by membrane μ, but not by secreted μ heavy chains. 1363.

Marcelletti, J. F. *See* Richards, Marcelletti, and Katz.

Marcos, M. A. R. *See* Toribio, de la Hera, Borst, Marcos, Márquez, Alonso, Bárcena, and Martínez-A.

Márquez, C. *See* Toribio, de la Hera, Borst, Marcos, Márquez, Alonso, Bárcena, and Martínez-A.

Marrs, C. F. *See* Ruehl, Marrs, Fernandez, Falkow, and Schoolnik.

Martin, M. E. *See* Haynes, Martin, Kay, and Kurtzberg.

Martin, W. J. *See* Vogel, Davis, McKinney, McMillan, Martin, and Goodenow.

Martínez-A, C. *See* Toribio, de la Hera, Borst, Marcos, Márquez, Alonso, Bárcena, and Martínez-A.

Marusic-Galesic, S. *See* Korman, Marusic-Galesic, Spencer, Kruisbeek, and Raulet.

— *See* Saito, Hochstenbach, Marusic-Galesic, Kruisbeek, Brenner, and Germain.

Masiarz, F. *See* Sherry, Tekamp-Olson, Gallegos, Bauer, Davatelis, Wolpe, Masiarz, Coit, and Cerami.

Mason, D. Y. *See* Lee, Crocker, Westaby, Key, Mason, Gordon, and Weatherall.
Mathieu, M. *See* Hoang, Haman, Goncalves, Letendre, Mathieu, Wong, and Clark.
Mathur, N. K. *See* Kaplan, Laal, Sheftel, Nusrat, Nath, Mathur, Mishra, and Cohn.
Matis, L. A., Ezquerra, A., and Coligan, J. E. Expression of two distinct T cell receptor α/β heterodimers by an antigen-specific T cell clone. 2379.
— *See* Bluestone, Cron, Cotterman, Houlden, and Matis.
Matsuda, S. *See* Seto, Kawanishi, Matsuda, and Ogawa.
Matsueda, G. *See* Nawroth, Handley, Matsueda, DeWaal, Gerlach, Blohm, and Stern.
Matthews, T. J. *See* Chaffee, Leeds, Matthews, Weinhold, Skinner, Bolognesi, and Hershfield.
Maurer-Fogy, I. *See* Rosenstreich, Tu, Kinkade, Maurer-Fogy, Kahn, Barton, and Farina.
Maury, C. *See* Gresser, Maury, Vignaux, Haller, Belardelli, and Tovey.
McCartney-Francis, N. *See* Wahl, Hunt, Bansal, McCartney-Francis, Ellingsworth, and Allen.
McCarty, M. *See* Fillit, Blake, MacDonald, and McCarty.
McClintock, P. R. *See* Cronin, Love, Miller, McClintock, and Plotz.
McGrogan, M., Simonsen, C., Scott, R., Griffith, J., Ellis, N., Kennedy, J., Campanelli, D., Nathan, C., and Gabay, J. Isolation of a complementary DNA clone encoding a precursor to human eosinophil major basic protein. 2295.
McInnes, R. R. *See* Letarte, Vera, Tran, Addis, Onizuka, Quackenbush, Jongeneel, and McInnes.
McKean, D. J. *See* Buerstedde, Pease, Nilson, Bell, Chase, Buerstedde, and McKean.
McKenzie, J. L. *See* Hart and McKenzie.
McKinney, D. M. *See* Vogel, Davis, McKinney, McMillan, Martin, and Goodenow.
McLaughlin-Taylor, E. *See* Mann, McLaughlin-Taylor, Wallace, and Forman.
McLean, J. *See* Hochstenbach, Parker, McLean, Gieselmann, Band, Bank, Chess, Spits, Strominger, Seidman, and Brenner.
McMichael, A. *See* Gotch, McMichael, and Rothbard.
McMillan, M. *See* Vogel, Davis, McKinney, McMillan, Martin, and Goodenow.
Meager, A. *See* Frei, Leist, Meager, Gallo, Leppert, Zinkernagel, and Fontana.
— *See* Rotteveel, Kokkelink, Van Lier, Kuenen, Meager, Miedema, and Lucas.
Medcalf, R. L., Kruithof, E. K. O., and Schleuning, W.-D. Plasminogen activator inhibitor 1 and 2 are tumor necrosis factor/cachectin-responsive genes. 751.
Mekalanos, J. J. *See* Herrington, Hall, Losonsky, Mekalanos, Taylor, and Levine.
Melioli, G. *See* Ciccone, Viale, Pende, Malnati, Biassoni, Melioli, Moretta, Long, and Moretta.
Mellins, E., Arp, B., Ochs, B., Erlich, H., and Pious, D. A single amino acid substitution in the human histocompatibility leukocyte antign DR3 β chain selectively alters antigen presentation. 1531.
Melvold, R. W. *See* Hemmi, Geliebter, Zeff, Melvold, and Nathenson.
Melzner, B. *See* Schultheiss, Kühl, Janda, Melzner, Ulrich, and Morad.
Mendel, E. *See* Levy, Mendel, Kon, Avnur, and Levy.
Mercolino, T. J., Arnold, L. W., Hawkins, L. A., and Haughton, G. Normal mouse peritoneum contains a large population of Ly-1$^+$ (CD5) B cells that recognize phosphatidyl choline.Relationship to cells that secrete hemolytic antibody specific for autologous erythrocytes. 687.
Merino, M. J. *See* Fraker, Stovroff, Merino, and Norton.
Merle-Béral, H. *See* Karray, DeFrance, Merle-Béral, Banchereau, Debré, and Galanaud.
Metlay, J. *See* Puré, Inaba, and Metlay.
Meunier-Rotival, M. *See* Gueguen, Meunier-Rotival, Bernard, and Alvarez.
Michie, S. A., Kirkpatrick, E. A., and Rouse, R. V. Rare peripheral T cells migrate to and persist in normal mouse thymus. 1929.
Michon, F. *See* Kabat, Liao, Osserman, Gamian, Michon, and Jennings.
Miedema, F. *See* Rotteveel, Kokkelink, Van Lier, Kuenen, Meager, Miedema, and Lucas.
Miesner, D. R. *See* Hourcade, Miesner, Atkinson, and Holers.
Migone, N. *See* Moretta, Bottino, Ciccone, Tambussi, Mingari, Ferrini, Casorati, Varese, Viale, Migone, and Moretta.
Miletic, V. *See* Klickstein, Bartow, Miletic, Rabson, Smith, and Fearon.
Miller, F. W. *See* Cronin, Love, Miller, McClintock, and Plotz.
Mingari, M. C. *See* Bottino, Tambussi, Ferrini, Ciccone, Varese, Mingari, Moretta, and Moretta.
— *See* Moretta, Bottino, Ciccone, Tambussi, Mingari, Ferrini, Casorati, Varese, Viale, Migone, and Moretta.
Minota, S., Cameron, B., Welch, W. J., and Winfield, J. B. Autoantibodies to the constitutive 73-kD member of the hsp70 family of heat shock proteins in systemic lupus erythematosus. 1475.
Mishra, R. S. *See* Kaplan, Laal, Sheftel, Nusrat, Nath, Mathur, Mishra, and Cohn.
Mita, S., Harada, N., Naomi, S., Hitoshi, Y., Sakamoto, K., Akagi, M., Tominaga, A., and Takatsu, K. Receptors for T cell-replacing factor/interleukin 5. Specificity, quantitation, and its implication. 863.
Mitchell, D. J. *See* Zamvil, Mitchell, Powell, Sakai, Rothbard, and Steinman.
Mitchell, J. A. *See* Ripoche, Mitchell, Erdei, Madin, Moffatt, Mokoena, Gordon, and Sim.
Miyama-Inaba, M., Kuma, S.-I., Inaba, K., Ogata, H., Iwai, H., Yasumizu, R., Muramatsu, S., Steinman, R. M., and Ikehara, S. Unusual phenotype of B cells in the thymus of normal mice. 811.
Miyazawa, M., Nishio, J., and Chesebro, B. Genetic control of T cell responsiveness to the Friend murine leukemia virus envelope antigen.Identification of class II loci of the H-2 as immune response genes. 1587.
Mizuno, S. *See* Yang, Denning, Mizuno, Dupont, and Haynes.

Mizuochi, T., Tentori, L., Sharrow, S. O., Kruisbeek, A. M., and Singer, A. Differentiation of Ia-reactive $CD8^+$ murine T cells does not require Ia engagement. Implications for the role of CD4 and CD8 accessory molecules in T cell differentiation. 437.
— *See* Rosenberg, Mizuochi, and Singer.
Moffatt, B. *See* Ripoche, Mitchell, Erdei, Madin, Moffatt, Mokoena, Gordon, and Sim.
Moingeon, P., Alcover, A., Clayton, L. K., Chang, H.-C., Transy, C., and Reinherz, E. L. Expression of a functional CD3-Ti antigen/MHC receptor in the absence of surface CD2. Analysis with clonal Jurkat cell mutants. 2077.
Mokoena, T. *See* Ripoche, Mitchell, Erdei, Madin, Moffatt, Mokoena, Gordon, and Sim.
Mold, C., Bradt, B. M., Nemerow, G. R., and Cooper, N. R. Epstein-Barr virus regulates activation and processing of the third component of complement. 949.
Moll, A. *See* Achtman, Neibert, Crowe, Strittmatter, Kusecek, Weyse, Walsh, Slawig, Morelli, Moll, and Blake.
Mongini, P. K. A. *See* Rudich, Roux, Winchester, and Mongini.
Montagnier, L. *See* Salmon, Olivier, Riviere, Brisson, Gluckman, Kieny, Montagnier, and Klatzmann.
Morad, M. *See* Schultheiss, Kühl, Janda, Melzner, Ulrich, and Morad.
Morelli, G. *See* Achtman, Neibert, Crowe, Strittmatter, Kusecek, Weyse, Walsh, Slawig, Morelli, Moll, and Blake.
Moretta, A., Bottino, C., Ciccone, E., Tambussi, G., Mingari, M. C., Ferrini, S., Casorati, G., Varese, P., Viale, O., Migone, N., and Moretta, L. Human peripheral blood lymphocytes bearing T cell receptor γ/δ. Expression of CD8 differentiation antigen correlates with the expression of the 55-kD, $C\gamma 2$-encoded γ chain. 2349.
— *See* Bottino, Tambussi, Ferrini, Ciccone, Varese, Mingari, Moretta, and Moretta.
— *See* Ciccone, Ferrini, Bottino, Viale, Prigione, Pantaleo, Tambussi, Moretta, and Moretta.
— *See* Ciccone, Viale, Pende, Malnati, Biassoni, Melioli, Moretta, Long, and Moretta.
— *See* Pantaleo, Zocchi, Ferrini, Poggi, Tambussi, Bottino, Moretta, and Moretta.
Moretta, L. *See* Bottino, Tambussi, Ferrini, Ciccone, Varese, Mingari, Moretta, and Moretta.
— *See* Ciccone, Ferrini, Bottino, Viale, Prigione, Pantaleo, Tambussi, Moretta, and Moretta.
— *See* Ciccone, Viale, Pende, Malnati, Biassoni, Melioli, Moretta, Long, and Moretta.
— *See* Moretta, Bottino, Ciccone, Tambussi, Mingari, Ferrini, Casorati, Varese, Viale, Migone, and Moretta.
— *See* Pantaleo, Zocchi, Ferrini, Poggi, Tambussi, Bottino, Moretta, and Moretta.
Morley, B. J., Chin, K. N., Newton, M. E., and Weiss, A. The lysine residue in the membrane-spanning domain of the β chain is necessary for cell surface expression of the T cell antigen receptor. 1971.
Morris, D. H. *See* Santoro, Morris, Murphy, and Baker.
Morrison, S. L. *See* Wallick, Kabat, and Morrison.
Morse, H. C., III *See* Davidson, Pierce, Rudikoff, and Morse.
— *See* Yetter, Buller, Lee, Elkins, Mosier, Fredrickson, and Morse.
Mosier, D. E. *See* Yetter, Buller, Lee, Elkins, Mosier, Fredrickson, and Morse.
Mosmann, T. R. *See* Fernandez-Botran, Sanders, Mosmann, and Vitetta.
Muegge, K. *See* Harel-Bellan, Durum, Muegge, Abbas, and Farrar.
Mueller-Eckhardt, C. *See* Bhakdi, Muhly, Mannhardt, Hugo, Klapettek, Mueller-Eckhardt, and Roka.
Muhly, M. *See* Bhakdi, Muhly, Mannhardt, Hugo, Klapettek, Mueller-Eckhardt, and Roka.
Müller, B., and Reth, M. Ordered activation of the Igλ locus in Kale Abelson B cell lines. 2130.
Muramatsu, S. *See* Hirayama, Inaba, Inaba, Kato, Kitaura, Hosokawa, Ikehara, and Muramatsu.
— *See* Inaba, Inaba, Kinashi, Tashiro, Witmer-Pack, Crowley, Kaplan, Valinsky, Romani, Ikehara, Muramatsu, Honjo, and Steinman.
— *See* Miyama-Inaba, Kuma, Inaba, Ogata, Iwai, Yasumizu, Muramatsu, Steinman, and Ikehara.
Murphy, R. C. *See* Santoro, Morris, Murphy, and Baker.
Musso, T. *See* Boraschi, Nencioni, Villa, Censini, Bossu, Ghiara, Presentini, Perin, Frasca, Doria, Forni, Musso, Giovarelli, Ghezzi, Bertini, Besedovsky, Del Rey, Sipe, Antoni, Silvestri, and Tagliabue.

N

Naganuma, K. *See* Koike, Nakahata, Takagi, Kobayashi, Ishiguro, Tsuji, Naganuma, Okano, Akiyama, and Akabane.
Nagler, A., Greenberg, P. L., Lanier, L. L., and Phillips, J. H. The effects of recombinant interleukin 2-activated natural killer cells on autologous peripheral blood hematopoietic progenitors. 47.
Nagy, Z. A. *See* Adorini, Appella, Doria, and Nagy.
Nakahata, T. *See* Koike, Nakahata, Takagi, Kobayashi, Ishiguro, Tsuji, Naganuma, Okano, Akiyama, and Akabane.
Naomi, S. *See* Mita, Harada, Naomi, Hitoshi, Sakamoto, Akagi, Tominaga, and Takatsu.
Nath, I. *See* Kaplan, Laal, Sheftel, Nusrat, Nath, Mathur, Mishra, and Cohn.
Nathan, C. *See* McGrogan, Simonsen, Scott, Griffith, Ellis, Kennedy, Campanelli, Nathan, and Gabay.
Nathenson, S. G. *See* Hemmi, Geliebter, Zeff, Melvold, and Nathenson.
Natovitz, P. *See* Scott, Natovitz, Coffman, Pearce, and Sher.
Nawroth, P., Handley, D., Matsueda, G., DeWaal, R., Gerlach, H., Blohm, D., and Stern, D. Tumor necrosis factor/cachectin-induced intravascular fibrin formation in Meth A fibrosarcomas. 637.
Neibert, M. *See* Achtman, Neibert, Crowe, Strittmatter, Kusecek, Weyse, Walsh, Slawig, Morelli, Moll, and Blake.
Nemerow, G. R. *See* Mold, Bradt, Nemerow, and Cooper.

Nencioni, L. *See* Boraschi, Nencioni, Villa, Censini, Bossu, Ghiara, Presentini, Perin, Frasca, Doria, Forni, Musso, Giovarelli, Ghezzi, Bertini, Besedovsky, Del Rey, Sipe, Antoni, Silvestri, and Tagliabue.

Neubauer, R. H. *See* North, Neubauer, Huang, Newton, and Loveless.

Newberg, M. *See* Purkerson, Newberg, Wise, Lynch, and Isakson.

Newton, M. E. *See* Morley, Chin, Newton, and Weiss.

Newton, R. C. *See* North, Neubauer, Huang, Newton, and Loveless.

Niederkorn, J. Y. *See* Peeler, Callanan, Luckenbach, and Niederkorn.

Nilson, A. E. *See* Buerstedde, Pease, Nilson, Bell, Chase, Buerstedde, and McKean.

Nishio, J. *See* Miyazawa, Nishio, and Chesebro.

Nishizuka, Y. *See* Ikeda, Taguchi, Takahashi, Itoh, and Nishizuka.

Nisonoff, A. *See* Haba and Nisonoff.

North, R. J., Neubauer, R. H., Huang, J. J. H., Newton, R. C., and Loveless, S. E. Interleukin 1-induced, T cell-mediated regression of immunogenic murine tumors.Requirement for an adequate level of already acquired host concomitant immunity. 2031.

— *See* Awwad and North.

Norton, J. A. *See* Fraker, Stovroff, Merino, and Norton.

Notkins, A. L. *See* Burastero, Casali, Wilder, and Notkins.

Nudelman, E. *See* Tsuji, Clausen, Nudelman, Kaizu, Hakomori, and Isojima.

Nusrat, A. R., Wright, S. D., Aderem, A. A., Steinman, R. M., and Cohn, Z. A. Properties of isolated red pulp macrophages from mouse spleen. 1505.

Nusrat, A. *See* Kaplan, Laal, Sheftel, Nusrat, Nath, Mathur, Mishra, and Cohn.

Nussenzweig, V. *See* Ley, Andrews, Robbins, and Nussenzweig.

Nuti, S. *See* De Magistris, Romano, Nuti, Rappuoli, and Tagliabue.

O

Ochs, B. *See* Mellins, Arp, Ochs, Erlich, and Pious.

Ogata, H. *See* Miyama-Inaba, Kuma, Inaba, Ogata, Iwai, Yasumizu, Muramatsu, Steinman, and Ikehara.

Ogawa, K. *See* Seto, Kawanishi, Matsuda, and Ogawa.

Ogura, T. *See* Saito, Sabe, Suzuki, Kondo, Ogura, Shimizu, and Honjo.

Öhlén, C. *See* Höglund, Ljunggren, Öhlén, Ährlund-Richter, Scangos, Bieberich, Jay, Klein, and Kärre.

Ohnishi, K. *See* Katz, Ohnishi, Lebow, and Bonavida.

Okada, A., Bank, I., Rogozinski, L., Takihara, Y., Mak, T. W., Chess, L., and Alt, F. W. Structure of the γ/δ T cell receptor of a human thymocyte clone. 1481.

Okano, A. *See* Koike, Nakahata, Takagi, Kobayashi, Ishiguro, Tsuji, Naganuma, Okano, Akiyama, and Akabane.

Oksenberg, J. R., Judd, A. K., Ko, C., Lim, M., Fernandez, R., Schoolnik, G. K., and Steinman, L. MHC-restricted recognition of immunogenic T cell epitopes of pertussis toxin reveals determinants in man distinct from the ADP-ribosylase active site. 1855.

Okusawa, S., Yancey, K. B., van der Meer, J. W. M., Endres, S., Lonnemann, G., Hefter, K., Frank, M. M., Burke, J. F., Dinarello, C. A., and Gelfand, J. A. C5a stimulates secretion of tumor necrosis factor from human mononuclear cells in vitro. Comparison with secretion of interleukin 1β and interleukin 1α. 443.

Oldstone, M. B. A., Whitton, J. L., Lewicki, H., and Tishon, A. Fine dissection of a nine amino acid glycoprotein epitope, a major determinant recognized by lymphocytic choriomeningitis virus-specific class I-restricted H-2D^b cytotoxic T lymphocytes. 559.

Olivier, R. *See* Salmon, Olivier, Riviere, Brisson, Gluckman, Kieny, Montagnier, and Klatzmann.

Olson, G. A. *See* Yoo, Kim, Stuart, Floyd, Olson, Cremer, and Kang.

Onizuka, R. J. *See* Letarte, Vera, Tran, Addis, Onizuka, Quackenbush, Jongeneel, and McInnes.

Openshaw, P. J. M. *See* Cannon, Openshaw, and Askonas.

Osborne, B. A. *See* Ferguson, Rudikoff, and Osborne.

Osman, G. E., Wortis, H. H., and Brodeur, P. H. Strain variation in the frequency of Abelson murine leukemia virus-transformed fetal liver pre-B cells bearing complete immunoglobulin heavy chain rearrangements. 2023.

— *See* Brodeur, Osman, Mackle, and Lalor.

Osserman, E. F. *See* Kabat, Liao, Osserman, Gamian, Michon, and Jennings.

Ottenhoff, T. H. M., Kale Ab, B. K., Van Embden, J. D. A., Thole, J. E. R., and Kiessling, R. The recombinant 65-kD heat shock protein of *Mycobacterium bovis* bacillus Calmette-Guerin/*M. tuberculosis* is a target molecule for CD4$^+$ cytotoxic T lymphocytes that lyse human monocytes. 1947.

Owhashi, M., and Heber-Katz, E. Protection from experimental allergic encephalomyelitis conferred by a monoclonal antibody directed against a shared idiotype on rat T cell receptors specific for myelin basic protein. 2153.

P

Paige, C. J. *See* Sauter and Paige.

Pantaleo, G., Zocchi, M. R., Ferrini, S., Poggi, A., Tambussi, G., Bottino, C., Moretta, L., and Moretta, A. Human cytolytic cell clones lacking surface expression of T cell receptor α/β or γ/δ. Evidence that surface structures other than CD3 or CD2 molecules are required for signal transduction. 13.

— *See* Ciccone, Ferrini, Bottino, Viale, Prigione, Pantaleo, Tambussi, Moretta, and Moretta.

Parker, C. *See* Hochstenbach, Parker, McLean, Gieselmann, Band, Bank, Chess, Spits, Strominger, Seidman, and Brenner.

Parnes, J. R. *See* Shiue, Gorman, and Parnes.

Paterson, Y. *See* Cooper, Corradin, and Paterson.

Pawlowski, N. A., Kaplan, G., Abraham, E., and Cohn, Z. A. The selective binding and transmigration of monocytes through the junctional complexes of human endothelium. 1865.

Pearce, E. *See* Scott, Natovitz, Coffman, Pearce, and Sher.

Pease, L. R. *See* Barker, Gleich, and Pease.

— *See* Buerstedde, Pease, Nilson, Bell, Chase, Buerstedde, and McKean.

Peeler, J. S., Callanan, D. G., Luckenbach, M. W., and Niederkorn, J. Y. Presentation of the H-Y antigen on Langerhans' cell–negative corneal grafts downregulates the cytotoxic T cell response and converts responder strain mice into phenotypic nonresponders. 1749.

Pende, D. *See* Ciccone, Viale, Pende, Malnati, Biassoni, Melioli, Moretta, Long, and Moretta.

Perin, F. *See* Boraschi, Nencioni, Villa, Censini, Bossu, Ghiara, Presentini, Perin, Frasca, Doria, Forni, Musso, Giovarelli, Ghezzi, Bertini, Besedovsky, Del Rey, Sipe, Antoni, Silvestri, and Tagliabue.

Perlmutter, R. M. *See* Ziegler, Wilson, and Perlmutter.

Perno, C.-F., Yarchoan, R., Cooney, D. A., Hartman, N. R., Gartner, S., Popovic, M., Hao, Z., Gerrard, T. L., Wilson, Y. A., Johns, D. G., and Broder, S. Inhibition of human immunodeficiency virus (HIV-1/HTLV-III$_{Ba-L}$) replication in fresh and cultured human peripheral blood monocytes/macrophages by azidothymidine and related 2′, 3′-dideoxynucleosides. 1111.

Persechini, P. M. *See* Jiang, Persechini, Zychlinsky, Liu, Perussia, and Young.

Perussia, B. *See* Jiang, Persechini, Zychlinsky, Liu, Perussia, and Young.

Peters, M. G., Ambrus, J. L., Jr., Fauci, A. S., and Brown, E. J. The Bb fragment of complement factor B acts as a B cell growth factor. 1225.

Peterson, A. *See* Bierer, Peterson, Gorga, Herrmann, and Burakoff.

Peto, T. E. A. *See* Hershko and Peto.

Phillips, J. H. *See* Nagler, Greenberg, Lanier, and Phillips.

Pierce, J. H. *See* Davidson, Pierce, Rudikoff, and Morse.

Pierce, S. K. *See* Casten, Kaumaya, and Pierce.

Piguet, P.-F. *See* Grau, Kindler, Piguet, Lambert, and Vassalli.

Pious, D. *See* Mellins, Arp, Ochs, Erlich, and Pious.

Platsoucas, C. D. *See* Itoh, Platsoucas, and Balch.

Plotz, P. H. *See* Cronin, Love, Miller, McClintock, and Plotz.

Poggi, A. *See* Pantaleo, Zocchi, Ferrini, Poggi, Tambussi, Bottino, Moretta, and Moretta.

Poirier, T. P., Kehoe, M. A., and Beachey, E. H. Protective immunity evoked by oral administration of attenuated *aroA Salmonella typhimurium* expressing cloned streptococcal M protein. 25.

Popovic, M. *See* Perno, Yarchoan, Cooney, Hartman, Gartner, Popovic, Hao, Gerrard, Wilson, Johns, and Broder.

Posnett, D. N. *See* Gottlieb, Luster, Posnett, and Carter.

Post, T. W. *See* Lublin, Liszewski, Post, Arce, Le Beau, Rebentisch, Lemons, Seya, and Atkinson.

Potter, T. A. *See* Connolly, Potter, Wormstall, and Hansen.

Powell, M. B. *See* Zamvil, Mitchell, Powell, Sakai, Rothbard, and Steinman.

Presentini, R. *See* Boraschi, Nencioni, Villa, Censini, Bossu, Ghiara, Presentini, Perin, Frasca, Doria, Forni, Musso, Giovarelli, Ghezzi, Bertini, Besedovsky, Del Rey, Sipe, Antoni, Silvestri, and Tagliabue.

Prigione, I. *See* Ciccone, Ferrini, Bottino, Viale, Prigione, Pantaleo, Tambussi, Moretta, and Moretta.

Puré, E., Inaba, K., and Metlay, J. Lymphokine production by murine T cells in the mixed leukocyte reaction. 795.

Purkerson, J. M., Newberg, M., Wise, G., Lynch, K. R., and Isakson, P. C. Interleukin 5 and interleukin 2 cooperate with interleukin 4 to induce IgG1 secretion from anti-Ig-treated B cells. 1175.

Q

Quackenbush, E. J. *See* Letarte, Vera, Tran, Addis, Onizuka, Quackenbush, Jongeneel, and McInnes.

R

Rabson, L. D. *See* Klickstein, Bartow, Miletic, Rabson, Smith, and Fearon.

Raff, H. V., Siscoe, P. J., Wolff, E. A., Maloney, G., and Shuford, W. Human monoclonal antibodies to group B streptococcus.Reactivity and in vivo protection against multiple serotypes. 905.

Rappuoli, R. *See* De Magistris, Romano, Nuti, Rappuoli, and Tagliabue.

Ratajczak, H. V., Sothern, R. B., and Hrushesky, W. J. M. Estrous influence on surgical cure of a mouse breast cancer. 73.

Raulet, D. H. *See* Korman, Marusic-Galesic, Spencer, Kruisbeek, and Raulet.

Rebentisch, M. B. *See* Lublin, Liszewski, Post, Arce, Le Beau, Rebentisch, Lemons, Seya, and Atkinson.

Reimann, G. *See* Zinkernagel, Rüedi, Althage, Hengartner, and Reimann.

Reinherz, E. L. *See* Moingeon, Alcover, Clayton, Chang, Transy, and Reinherz.

Reth, M. *See* Müller and Reth.

Richards, M. L., Marcelletti, J. F., and Katz, D. H. IgE-antigen complexes enhance FcεR and Ia expression by murine B lymphocytes. 571.

Rincón, M. *See* Cebrián, Yagüe, Rincón, López-Botet, de Landázuri, and Sánchez-Madrid.

Ripoche, J., Mitchell, J. A., Erdei, A., Madin, C., Moffatt, B., Mokoena, T., Gordon, S., and Sim, R. B. Interferon γ induces synthesis of complement alternative pathway proteins by human endothelial cells in culture. 1917.

Riviere, Y. *See* Salmon, Olivier, Riviere, Brisson, Gluckman, Kieny, Montagnier, and Klatzmann.
Robbins, E. S. *See* Ley, Andrews, Robbins, and Nussenzweig.
Rogozinski, L. *See* Okada, Bank, Rogozinski, Takihara, Mak, Chess, and Alt.
Roka, L. *See* Bhakdi, Muhly, Mannhardt, Hugo, Klapettek, Mueller-Eckhardt, and Roka.
Romani, N. *See* Inaba, Inaba, Kinashi, Tashiro, Witmer-Pack, Crowley, Kaplan, Valinsky, Romani, Ikehara, Muramatsu, Honjo, and Steinman.
Romano, M. *See* De Magistris, Romano, Nuti, Rappuoli, and Tagliabue.
Roncarolo, M. G., Yssel, H., Touraine, J.-L., Bacchetta, R., Gebuhrer, L., De Vries, J. E., and Spits, H. Antigen recognition by MHC-incompatible cells of a human mismatched chimera. 2139.
Rosen, F. S. *See* Strang, Cholin, Spragg, Davis, Schneeberger, Donaldson, and Rosen.
Rosenberg, A. S., Mizuochi, T., and Singer, A. Evidence for involvement of dual-function T cells in rejection of MHC class I disparate skin grafts. Assessment of MHC class I alloantigens as in vivo helper determinants. 33.
Rosenberg, S. A. *See* Kawakami, Rosenberg, and Lotze.
Rosenfelder, G. *See* Tuomanen, Towbin, Rosenfelder, Braun, Larson, Hansson, and Hill.
Rosenstreich, D. L., Tu, J. H., Kinkade, P. R., Maurer-Fogy, I., Kahn, J., Barton, R. W., and Farina, P. R. A human urine-derived interleukin 1 inhibitor.Homology with deoxyribonuclease I. 1767.
Roser, B. *See* Singh, Brown, and Roser.
Rothbard, J. B. *See* Zamvil, Mitchell, Powell, Sakai, Rothbard, and Steinman.
Rothbard, J. *See* Gotch, McMichael, and Rothbard.
Rothman, P., Lutzker, S., Cook, W., Coffman, R., and Alt, F. W. Mitogen plus interleukin 4 induction of $C\epsilon$ transcripts in B lymphoid cells. 2385.
Rothstein, J. L., Lint, T. F., and Schreiber, H. Tumor necrosis factor/cachectin. Induction of hemorrhagic necrosis in normal tissue requires the fifth component of complement (C5). 2007.
— *See* Magilavy and Rothstein.
Rotteveel, F. T. M., Kokkelink, I., Van Lier, R. A. W., Kuenen, B., Meager, A., Miedema, F., and Lucas, C. J. Clonal analysis of functionally distinct human $CD4^+$ T cell subsets. 1659.
Rouse, R. V. *See* Michie, Kirkpatrick, and Rouse.
Roux, K. H. *See* Rudich, Roux, Winchester, and Mongini.
Rubocki, R. J. *See* Lee, Rubocki, Lie, and Hansen.
Rudich, S. M., Roux, K. H., Winchester, R. J., and Mongini, P. K. A. Anti-IgM-mediated B cell signaling.Molecular analysis of ligand binding requisites for human B cell clonal expansion and tolerance. 247.
Rudikoff, S. *See* Davidson, Pierce, Rudikoff, and Morse.
— *See* Ferguson, Rudikoff, and Osborne.
Rüedi, E. *See* Zinkernagel, Rüedi, Althage, Hengartner, and Reimann.
Ruehl, W. W., Marrs, C. F., Fernandez, R., Falkow, S., and Schoolnik, G. K. Purification, characterization, and pathogenicity of *Moraxella bovis* pili. 983.
Ruscetti, F. W. *See* Keller, Mantel, Sing, Ellingsworth, Ruscetti, and Ruscetti.
Ruscetti, S. K. *See* Keller, Mantel, Sing, Ellingsworth, Ruscetti, and Ruscetti.
Russell, D. G., and Wright, S. D. Complement receptor type 3 (CR3) binds to an Arg-Gly-Asp-containing region of the major surface glycoprotein, gp63, of *Leishmania* promastigotes. 279.

S

Saavedra, R. A. *See* Kono, Urban, Horvath, Ando, Saavedra, and Hood.
Sabe, H. *See* Saito, Sabe, Suzuki, Kondo, Ogura, Shimizu, and Honjo.
Sachs, D. H. *See* Sykes, Sheard, and Sachs.
— *See* Sykes, Sheard, and Sachs.
Saito, H. *See* Streuli, Krueger, Hall, Schlossman, and Saito.
Saito, T., Hochstenbach, F., Marusic-Galesic, S., Kruisbeek, A. M., Brenner, M., and Germain, R. N. Surface expression of only $\gamma\delta$ and/or $\alpha\beta$ T cell receptor heterodimers by cells with four (α, β, γ, δ) functional receptor chains. 1003.
Saito, Y., Sabe, H., Suzuki, N., Kondo, S., Ogura, T., Shimizu, A., and Honjo, T. A larger number of L chains (Tac) enhance the association rate of interleukin 2 to the high affinity site of the interleukin 2 receptor. 1563.
Saitoh, Y. *See* Kiyohara, Taniguchi, Kubota, Koga, Sakuragi, and Saitoh.
Sakai, K. *See* Zamvil, Mitchell, Powell, Sakai, Rothbard, and Steinman.
Sakamoto, K. *See* Mita, Harada, Naomi, Hitoshi, Sakamoto, Akagi, Tominaga, and Takatsu.
Sakuragi, T. *See* Kiyohara, Taniguchi, Kubota, Koga, Sakuragi, and Saitoh.
Salmon, P., Olivier, R., Riviere, Y., Brisson, E., Gluckman, J.-C, Kieny, M.-P., Montagnier, L., and Klatzmann, D. Loss of CD4 membrane expression and CD4 mRNA during acute human immunodeficiency virus replication. 1953.
Sánchez-Madrid, F. *See* Cebrián, Yagüe, Rincón, López-Botet, de Landázuri, and Sánchez-Madrid.
Sanders, V. M. *See* Fernandez-Botran, Sanders, Mosmann, and Vitetta.
Santoro, T. J., Morris, D. H., Murphy, R. C., and Baker, R. C. Aberrant production of leukotriene C_4 by macrophages from autoimmune-prone mice 783.
Saueracker, G. *See* Tokunaga, Saueracker, Kay, Christiansen, Anand, and Dawkins.
Sauter, H., and Paige, C. J. B cell progenitors have different growth requirements before and after immunoglobulin heavy chain commitment. 1511.
Saxon, A. *See* Sherr, Adelman, Saxon, Gilly, Wall, and Sidell.
Scangos, G. *See* Höglund, Ljunggren, Öhlén, Ährlund-Richter, Scangos, Bieberich, Jay, Klein, and Kärre.
Schleuning, W.-D. *See* Medcalf, Kruithof, and Schleuning.

Schlossman, S. F. *See* Streuli, Krueger, Hall, Schlossman, and Saito.
Schneeberger, E. E. *See* Strang, Cholin, Spragg, Davis, Schneeberger, Donaldson, and Rosen.
Schoolnik, G. K. *See* Oksenberg, Judd, Ko, Lim, Fernandez, Schoolnik, and Steinman.
— *See* Ruehl, Marrs, Fernandez, Falkow, and Schoolnik.
Schreiber, H. *See* Rothstein, Lint, and Schreiber.
Schrezenmeier, H., Ahnert-Hilger, G., and Fleischer, B. Inactivation of a T cell receptor–associated GTP-binding protein by antibody-induced modulation of the T cell receptor/CD3 complex. 817.
Schultheiss, H.-P., Kühl, U., Janda, I., Melzner, B., Ulrich, G., and Morad, M. Antibody-mediated enhancement of calcium permeability in cardiac myocytes. 2105.
Schulze, M. *See* Johnson, Couser, Alpers, Vissers, Schulze, and Klebanoff.
Scott, P., Natovitz, P., Coffman, R. L., Pearce, E., and Sher, A. Immunoregulation of cutaneous leishmaniasis.T cell lines that transfer protective immunity or exacerbation belong to different T helper subsets and respond to distinct parasite antigens. 1675.
Scott, R. *See* McGrogan, Simonsen, Scott, Griffith, Ellis, Kennedy, Campanelli, Nathan, and Gabay.
Seed, B. *See* Stamenkovic and Seed.
Seidman, J. G. *See* Hochstenbach, Parker, McLean, Gieselmann, Band, Bank, Chess, Spits, Strominger, Seidman, and Brenner.
Seto, A., Kawanishi, M., Matsuda, S., and Ogawa, K. Seronegative virus carriers in the infection of rabbits with human T lymphotropic virus type I. 2409.
Seya, T. *See* Lublin, Liszewski, Post, Arce, Le Beau, Rebentisch, Lemons, Seya, and Atkinson.
Sharrow, S. O. *See* Mizuochi, Tentori, Sharrow, Kruisbeek, and Singer.
Sheard, M. A. *See* Sykes, Sheard, and Sachs.
— *See* Sykes, Sheard, and Sachs.
Shearer, G. M. *See* Via and Shearer.
Sheftel, G. *See* Kaplan, Laal, Sheftel, Nusrat, Nath, Mathur, Mishra, and Cohn.
Sher, A. *See* Scott, Natovitz, Coffman, Pearce, and Sher.
Sherr, E., Adelman, D. C., Saxon, A., Gilly, M., Wall, R., and Sidell, N. Retinoic acid induces the differentiation of B cell hybridomas from patients with common variable immunodeficiency. 55.
Sherry, B., Tekamp-Olson, P., Gallegos, C., Bauer, D., Davatelis, G., Wolpe, S. D., Masiarz, F., Coit, D., and Cerami, A. Resolution of the two components of macrophage inflammatory protein 1, and cloning and characterization of one of those components, macrophage inflammatory protein 1β. 2251.
Shih, J. W.-K. *See* Jin, Shih, and Berkower.
Shimizu, A. *See* Saito, Sabe, Suzuki, Kondo, Ogura, Shimizu, and Honjo.
Shimojo, N. *See* Hogan, Shimojo, Walk, Engelhard, Maloy, Coligan, and Biddison.
Shimonkevitz, R. P., and Bevan, M. J. Split tolerance induced by the intrathymic adoptive transfer of thymocyte stem cells. 143.
Shiue, L., Gorman, S. D., and Parnes, J. R. A second chain of human CD8 is expressed on peripheral blood lymphocytes. 1993.
Shuford, W. *See* Raff, Siscoe, Wolff, Maloney, and Shuford.
Sidell, N. *See* Sherr, Adelman, Saxon, Gilly, Wall, and Sidell.
Sigaux, F. *See* Font, Chen, Bories, Duparc, Loiseau, Degos, Cann, Cohen, Dausset, and Sigaux.
Silverman, G. J., Goñi, F., Fernandez, J., Chen, P. P., Frangione, B., and Carson, D. A. Distinct patterns of heavy chain variable region subgroup use by human monoclonal autoantibodies of different specificity. 2361.
Silvestri, S. *See* Boraschi, Nencioni, Villa, Censini, Bossu, Ghiara, Presentini, Perin, Frasca, Doria, Fuu
Sim, R. B. *See* Ripoche, Mitchell, Erdei, Madin, Moffatt, Mokoena, Gordon, and Sim.
Simonsen, C. *See* McGrogan, Simonsen, Scott, Griffith, Ellis, Kennedy, Campanelli, Nathan, and Gabay.
Sinclair, J. *See* Borysiewicz, Hickling, Graham, Sinclair, Cranage, Smith, and Sissons.
Sing, G. K. *See* Keller, Mantel, Sing, Ellingsworth, Ruscetti, and Ruscetti.
Singer, A. *See* Mizuochi, Tentori, Sharrow, Kruisbeek, and Singer.
— *See* Rosenberg, Mizuochi, and Singer.
Singh, P. B., Brown, R. E., and Roser, B. Class I transplantation antigens in solution in body fluids and in the urine.Individuality signals to the environment. 195.
Sipe, J. D. *See* Boraschi, Nencioni, Villa, Censini, Bossu, Ghiara, Presentini, Perin, Frasca, Doria, Fuu
Siscoe, P. J. *See* Raff, Siscoe, Wolff, Maloney, and Shuford.
Sissons, J. G. P. *See* Borysiewicz, Hickling, Graham, Sinclair, Cranage, Smith, and Sissons.
Skinner, M. *See* Chaffee, Leeds, Matthews, Weinhold, Skinner, Bolognesi, and Hershfield.
Sklar, J. *See* Bird, Galili, Link, Stites, and Sklar.
Slawig, B. *See* Achtman, Neibert, Crowe, Strittmatter, Kusecek, Weyse, Walsh, Slawig, Morelli, Moll, and Blake.
Smith, G. L. *See* Borysiewicz, Hickling, Graham, Sinclair, Cranage, Smith, and Sissons.
Smith, G. *See* Townsend, Bastin, Gould, Brownlee, Andrew, Coupar, Boyle, Chan, and Smith.
Smith, J. A. *See* Klickstein, Bartow, Miletic, Rabson, Smith, and Fearon.
— *See* Lai, Huang, Briner, Guillet, Smith, and Gefter.
Sola, J. *See* Swanson, Barrera, Sola, and Boslego.
Sothern, R. B. *See* Ratajczak, Sothern, and Hrushesky.
Spencer, D. *See* Korman, Marusic-Galesic, Spencer, Kruisbeek, and Raulet.
Spits, H. *See* Hochstenbach, Parker, McLean, Gieselmann, Band, Bank, Chess, Spits, Strominger, Seidman, and Brenner.
— *See* Roncarolo, Yssel, Touraine, Bacchetta, Gebuhrer, De Vries, and Spits.
Spragg, J. *See* Strang, Cholin, Spragg, Davis, Schneeberger, Donaldson, and Rosen.

Stamenkovic, I., and Seed, B. CD19, the earliest differentiation antigen of the B cell lineage, bears three extracellular immunoglobulin-like domains and an Epstein-Barr virus–related cytoplasmic tail. 1205.

Starnes, C. O. *See* Carroll, Starnes, Levy, and Levy.

Steinman, L. *See* Oksenberg, Judd, Ko, Lim, Fernandez, Schoolnik, and Steinman.

— *See* Zamvil, Mitchell, Powell, Sakai, Rothbard, and Steinman.

Steinman, R. M. *See* Cohn and Steinman.

— *See* Inaba, Inaba, Kinashi, Tashiro, Witmer-Pack, Crowley, Kaplan, Valinsky, Romani, Ikehara, Muramatsu, Honjo, and Steinman.

— *See* Koide and Steinman.

— *See* Miyama-Inaba, Kuma, Inaba, Ogata, Iwai, Yasumizu, Muramatsu, Steinman, and Ikehara.

— *See* Nusrat, Wright, Aderem, Steinman, and Cohn.

Stern, D. *See* Nawroth, Handley, Matsueda, DeWaal, Gerlach, Blohm, and Stern.

Stevenson, H. C. *See* Griffith, Virella, Stevenson, and Lopes-Virella.

Stites, D. *See* Bird, Galili, Link, Stites, and Sklar.

Storb, U. *See* Manz, Denis, Witte, Brinster, and Storb.

Stovroff, M. C. *See* Fraker, Stovroff, Merino, and Norton.

Strang, C. J., Cholin, S., Spragg, J., Davis, A. E., III, Schneeberger, E. E., Donaldson, V. H., and Rosen, F. S. Angioedema induced by a peptide derived from complement component C2. 1685.

Streuli, M., Krueger, N. X., Hall, L. R., Schlossman, S. F., and Saito, H. A new member of the immunoglobulin superfamily that has a cytoplasmic region homologous to the leukocyte common antigen. 1523.

Strittmatter, W. *See* Achtman, Neibert, Crowe, Strittmatter, Kusecek, Weyse, Walsh, Slawig, Morelli, Moll, and Blake.

Strominger, J. L. *See* Hochstenbach, Parker, McLean, Gieselmann, Band, Bank, Chess, Spits, Strominger, Seidman, and Brenner.

Stuart, J. M. *See* Yoo, Kim, Stuart, Floyd, Olson, Cremer, and Kang.

Sung, S.-S. J., Jung, L. K. L., Walters, J. A., Chen, W., Wang, C. Y., and Fu, S. M. Production of tumor necrosis factor/cachectin by human B cell lines and tonsillar B cells. 1539.

Suzuki, N. *See* Saito, Sabe, Suzuki, Kondo, Ogura, Shimizu, and Honjo.

Swanson, J., Barrera, O., Sola, J., and Boslego, J. Expression of outer membrane protein II by gonococci in experimental gonorrhea. 2121.

Sykes, M., Sheard, M. A., and Sachs, D. H. Effects of T cell depletion in radiation bone marrow chimeras. II. Requirement for allogeneic T cells in the reconstituting bone marrow inoculum for subsequent resistance to breaking of tolerance. 661.

—, **Sheard, M. A., and Sachs, D. H.** Graft-versus-host–related immunosuppression is induced in mixed chimeras by alloresponses against either host or donor lymphohematopoietic cells. 2391.

T

Tagliabue, A. *See* Boraschi, Nencioni, Villa, Censini, Bossu, Ghiara, Presentini, Perin, Frasca, Doria, Forni, Musso, Giovarelli, Ghezzi, Bertini, Besedovsky, Del Rey, Sipe, Antoni, Silvestri, and Tagliabue.

— *See* De Magistris, Romano, Nuti, Rappuoli, and Tagliabue.

Taguchi, O. *See* Ikeda, Taguchi, Takahashi, Itoh, and Nishizuka.

Takagi, M. *See* Koike, Nakahata, Takagi, Kobayashi, Ishiguro, Tsuji, Naganuma, Okano, Akiyama, and Akabane.

Takahashi, T. *See* Ikeda, Taguchi, Takahashi, Itoh, and Nishizuka.

Takatsu, K. *See* Mita, Harada, Naomi, Hitoshi, Sakamoto, Akagi, Tominaga, and Takatsu.

Takihara, Y. *See* Okada, Bank, Rogozinski, Takihara, Mak, Chess, and Alt.

Tambussi, G. *See* Bottino, Tambussi, Ferrini, Ciccone, Varese, Mingari, Moretta, and Moretta.

— *See* Ciccone, Ferrini, Bottino, Viale, Prigione, Pantaleo, Tambussi, Moretta, and Moretta.

— *See* Moretta, Bottino, Ciccone, Tambussi, Mingari, Ferrini, Casorati, Varese, Viale, Migone, and Moretta.

— *See* Pantaleo, Zocchi, Ferrini, Poggi, Tambussi, Bottino, Moretta, and Moretta.

Taniguchi, K. *See* Kiyohara, Taniguchi, Kubota, Koga, Sakuragi, and Saitoh.

Tashiro, K. *See* Inaba, Inaba, Kinashi, Tashiro, Witmer-Pack, Crowley, Kaplan, Valinsky, Romani, Ikehara, Muramatsu, Honjo, and Steinman.

Taylor, R. K. *See* Herrington, Hall, Losonsky, Mekalanos, Taylor, and Levine.

Teale, J. M. *See* Jeong and Teale.

Tekamp-Olson, P. *See* Sherry, Tekamp-Olson, Gallegos, Bauer, Davatelis, Wolpe, Masiarz, Coit, and Cerami.

Tentori, L., Longo, D. L., Zuñiga-Pflucker, J. C., Wing, C., and Kruisbeek, A. M. Essential role of the interleukin 2–interleukin 2 receptor pathway in thymocyte maturation in vivo. 1741.

— *See* Mizuochi, Tentori, Sharrow, Kruisbeek, and Singer.

Tetta, C. *See* Camussi, Tetta, Bussolino, and Baglioni.

Thole, J. E. R. *See* Ottenhoff, Kale Ab, Van Embden, Thole, and Kiessling.

Thorley-Lawson, D. A. *See* Hurley and Thorley-Lawson.

Tishon, A. *See* Oldstone, Whitton, Lewicki, and Tishon.

Tokunaga, K., Saueracker, G., Kay, P. H., Christiansen, F. T., Anand, R., and Dawkins, R. L. Extensive deletions and insertions in different MHC supratypes detected by pulsed field gel electrophoresis. 933.

Tominaga, A. *See* Mita, Harada, Naomi, Hitoshi, Sakamoto, Akagi, Tominaga, and Takatsu.

Toribio, M. L., de la Hera, A., Borst, J., Marcos, M. A. R., Márquez, C., Alonso, J. M., Bárcena, A., and Martínez-A, C. Involvement of the interleukin 2 pathway in the rearrangement and expression of both α/β and γ/δ T cell receptor genes in human T cell precursors. 2231.

Touraine, J.-L. *See* Roncarolo, Yssel, Touraine, Bacchetta, Gebuhrer, De Vries, and Spits.

Tovey, M. G. *See* Gresser, Maury, Vignaux, Haller, Belardelli, and Tovey.

Towbin, H. *See* Tuomanen, Towbin, Rosenfelder, Braun, Larson, Hansson, and Hill.

Townsend, A., Bastin, J., Gould, K., Brownlee, G., Andrew, M., Coupar, B., Boyle, D., Chan, S., and Smith, G. Defective presentation to class I–restricted cytotoxic T lymphocytes in vaccinia-infected cells is overcome by enhanced degradation of antigen. 1211.

Townsend, K. *See* Firestein, Xu, Townsend, Broide, Alvaro-Gracia, Glasebrook, and Zvaifler.

Tran, R. *See* Letarte, Vera, Tran, Addis, Onizuka, Quackenbush, Jongeneel, and McInnes.

Transy, C. *See* Moingeon, Alcover, Clayton, Chang, Transy, and Reinherz.

Tsuji, K. *See* Koike, Nakahata, Takagi, Kobayashi, Ishiguro, Tsuji, Naganuma, Okano, Akiyama, and Akabane.

Tsuji, Y., Clausen, H., Nudelman, E., Kaizu, T., Hakomori, S.-I., and Isojima, S. Human sperm carbohydrate antigens defined by an antisperm human monoclonal antibody derived from an infertile woman bearing antisperm antibodies in her serum. 343.

Tu, J. H. *See* Rosenstreich, Tu, Kinkade, Maurer-Fogy, Kahn, Barton, and Farina.

Tuomanen, E., Towbin, H., Rosenfelder, G., Braun, D., Larson, G., Hansson, G. C., and Hill, R. Receptor analogs and monoclonal antibodies that inhibit adherence of *Bordetella pertussis* to human ciliated respiratory epithelial cells. 267.

Tykocinski, M. L. *See* Hambor, Tykocinski, and Kaplan.

U

Ulrich, G. *See* Schultheiss, Kühl, Janda, Melzner, Ulrich, and Morad.

Urban, J. L. *See* Kono, Urban, Horvath, Ando, Saavedra, and Hood.

V

Valinsky, J. *See* Inaba, Inaba, Kinashi, Tashiro, Witmer-Pack, Crowley, Kaplan, Valinsky, Romani, Ikehara, Muramatsu, Honjo, and Steinman.

Vanbervliet, B. *See* Defrance, Vanbervliet, Aubry, and Banchereau.

Van Der Logt, J. T. M. *See* Coutelier, Van Der Logt, Heessen, Vink, and Van Snick.

van der Meer, J. W. M. *See* Okusawa, Yancey, van der Meer, Endres, Lonnemann, Hefter, Frank, Burke, Dinarello, and Gelfand.

Van Embden, J. D. A. *See* Ottenhoff, Kale Ab, Van Embden, Thole, and Kiessling.

Van Lier, R. A. W. *See* Rotteveel, Kokkelink, Van Lier, Kuenen, Meager, Miedema, and Lucas.

Van Rood, J. J. *See* Voogt, Goulmy, Veenhof, Hamilton, Fibbe, Van Rood, and Falkenburg.

Van Snick, J. *See* Coutelier, Van Der Logt, Heessen, Vink, and Van Snick.

Varese, P. *See* Bottino, Tambussi, Ferrini, Ciccone, Varese, Mingari, Moretta, and Moretta.

— *See* Moretta, Bottino, Ciccone, Tambussi, Mingari, Ferrini, Casorati, Varese, Viale, Migone, and Moretta.

Vassalli, P. *See* Grau, Kindler, Piguet, Lambert, and Vassalli.

Veenhof, W. F. J. *See* Voogt, Goulmy, Veenhof, Hamilton, Fibbe, Van Rood, and Falkenburg.

Vera, S. *See* Letarte, Vera, Tran, Addis, Onizuka, Quackenbush, Jongeneel, and McInnes.

Via, C. S., and Shearer, G. M. Functional heterogeneity of L3T4$^+$ T cells in MRL-*lpr/lpr* mice. L3T4$^+$ T cells suppress major histocompatibility complex–self-restricted L3T4$^+$ T helper cell function in association with autoimmunity. 2165.

Viale, O. *See* Ciccone, Ferrini, Bottino, Viale, Prigione, Pantaleo, Tambussi, Moretta, and Moretta.

— *See* Ciccone, Viale, Pende, Malnati, Biassoni, Melioli, Moretta, Long, and Moretta.

— *See* Moretta, Bottino, Ciccone, Tambussi, Mingari, Ferrini, Casorati, Varese, Viale, Migone, and Moretta.

Vignaux, F. *See* Gresser, Maury, Vignaux, Haller, Belardelli, and Tovey.

Villa, L. *See* Boraschi, Nencioni, Villa, Censini, Bossu, Ghiara, Presentini, Perin, Frasca, Doria, Forni, Musso, Giovarelli, Ghezzi, Bertini, Besedovsky, Del Rey, Sipe, Antoni, Silvestri, and Tagliabue.

Vink, A. *See* Coutelier, Van Der Logt, Heessen, Vink, and Van Snick.

Virella, G. T. *See* Griffith, Virella, Stevenson, and Lopes-Virella.

Vissers, M. *See* Johnson, Couser, Alpers, Vissers, Schulze, and Klebanoff.

Vitetta, E. S. *See* Fernandez-Botran, Sanders, Mosmann, and Vitetta.

Vogel, J. M., Davis, A. C., McKinney, D. M., McMillan, M., Martin, W. J., and Goodenow, R. S. Molecular characterization of the C3HfB/HeN *H-2K^{km2}* mutation. Implications for the molecular basis of alloreactivity. 1781.

Voogt, P. J., Goulmy, E., Veenhof, W. F. J., Hamilton, M., Fibbe, W. E., Van Rood, J. J., and Falkenburg, J. H. F. Cellularly defined minor histocompatibility antigens are differentially expressed on human hematopoietic progenitor cells. 2337.

W

Wahl, S. M., Hunt, D. A., Bansal, G., McCartney-Francis, N., Ellingsworth, L., and Allen, J. B. Bacterial cell wall–induced immunosuppression. Role of transforming growth factor β. 1403.

Wakulchik, M. *See* Kwon, Kestler, Lee, Wakulchik, and Young.

Waldmann, H. *See* Bindon, Hale, Bruggemann, and Waldmann.

Walk, S. F. *See* Hogan, Shimojo, Walk, Engelhard, Maloy, Coligan, and Biddison.
Wall, R. *See* Sherr, Adelman, Saxon, Gilly, Wall, and Sidell.
Wallace, R. B. *See* Mann, McLaughlin-Taylor, Wallace, and Forman.
Wallick, S. C., Kabat, E. A., and Morrison, S. L. Glycosylation of a V_H residue of a monoclonal antibody against α(1–6) dextran increases its affinity for antigen. 1099.
Walsh, M. J. *See* Achtman, Neibert, Crowe, Strittmatter, Kusecek, Weyse, Walsh, Slawig, Morelli, Moll, and Blake.
Walters, J. A. *See* Sung, Jung, Walters, Chen, Wang, and Fu.
Wang, C. Y. *See* Sung, Jung, Walters, Chen, Wang, and Fu.
Weatherall, D. J. *See* Lee, Crocker, Westaby, Key, Mason, Gordon, and Weatherall.
Weinhold, K. J. *See* Chaffee, Leeds, Matthews, Weinhold, Skinner, Bolognesi, and Hershfield.
Weiss, A. *See* Morley, Chin, Newton, and Weiss.
Welch, W. J. *See* Minota, Cameron, Welch, and Winfield.
Westaby, S. *See* Lee, Crocker, Westaby, Key, Mason, Gordon, and Weatherall.
Wetzler, L. M., Blake, M. S., and Gotschlich, E. C. Characterization and specificity of antibodies to protein I of *Neisseria gonorrhoeae* produced by injection with various protein I–adjuvant preparations. 1883.
Weyse, E. *See* Achtman, Neibert, Crowe, Strittmatter, Kusecek, Weyse, Walsh, Slawig, Morelli, Moll, and Blake.
White, D. J. G. *See* Lim and White.
Whitton, J. L. *See* Oldstone, Whitton, Lewicki, and Tishon.
Wilder, R. L. *See* Burastero, Casali, Wilder, and Notkins.
Wilson, C. B. *See* Ziegler, Wilson, and Perlmutter.
Wilson, Y. A. *See* Perno, Yarchoan, Cooney, Hartman, Gartner, Popovic, Hao, Gerrard, Wilson, Johns, and Broder.
Winchester, R. J. *See* Rudich, Roux, Winchester, and Mongini.
Winfield, J. B. *See* Minota, Cameron, Welch, and Winfield.
Wing, C. *See* Tentori, Longo, Zuñiga-Pflucker, Wing, and Kruisbeek.
Wise, G. *See* Purkerson, Newberg, Wise, Lynch, and Isakson.
Witmer-Pack, M. *See* Inaba, Inaba, Kinashi, Tashiro, Witmer-Pack, Crowley, Kaplan, Valinsky, Romani, Ikehara, Muramatsu, Honjo, and Steinman.
Witte, O. *See* Manz, Denis, Witte, Brinster, and Storb.
Wolff, E. A. *See* Raff, Siscoe, Wolff, Maloney, and Shuford.
Wollish, W. *See* Magowan, Wollish, Anderson, and Leech.
Wolpe, S. D. *See* Sherry, Tekamp-Olson, Gallegos, Bauer, Davatelis, Wolpe, Masiarz, Coit, and Cerami.
Wong, G. G. *See* Hoang, Haman, Goncalves, Letendre, Mathieu, Wong, and Clark.
Wormstall, E.-M. *See* Connolly, Potter, Wormstall, and Hansen.
Wortis, H. H. *See* Osman, Wortis, and Brodeur.
Wright, S. D. *See* Nusrat, Wright, Aderem, Steinman, and Cohn.
— *See* Russell and Wright.

X

Xu, W.-D. *See* Firestein, Xu, Townsend, Broide, Alvaro-Gracia, Glasebrook, and Zvaifler.

Y

Yagüe, E. *See* Cebrián, Yagüe, Rincón, López-Botet, de Landázuri, and Sánchez-Madrid.
Yancey, K. B. *See* Okusawa, Yancey, van der Meer, Endres, Lonnemann, Hefter, Frank, Burke, Dinarello, and Gelfand.
Yancopoulos, G. D., Malynn, B. A., and Alt, F. W. Developmentally regulated and strain-specific expression of murine V_H gene families. 417.
Yang, S. Y., Denning, S. M., Mizuno, S., Dupont, B., and Haynes, B. F. A novel activation pathway for mature thymocytes.Costimulation of CD2 (T, p50) and CD28 (T, p44) induces autocrine interleukin 2/interleukin 2 receptor–mediated cell proliferation. 1457.
Yarchoan, R. *See* Perno, Yarchoan, Cooney, Hartman, Gartner, Popovic, Hao, Gerrard, Wilson, Johns, and Broder.
Yasumizu, R. *See* Miyama-Inaba, Kuma, Inaba, Ogata, Iwai, Yasumizu, Muramatsu, Steinman, and Ikehara.
Yetter, R. A., Buller, R. M. L., Lee, J. S., Elkins, K. L., Mosier, D. E., Fredrickson, T. N., and Morse, H. C., III. $CD4^+$ T cells are required for development of a murine retrovirus-induced immunodeficiency syndrome (MAIDS). 623.
Yewdell, J. W. *See* Bennink and Yewdell.
Yoo, T. J., Kim, S.-Y., Stuart, J. M., Floyd, R. A., Olson, G. A., Cremer, M. A., and Kang, A. H. Induction of arthritis in monkeys by immunization with type II collagen. 777.
Young, J. D.-E. *See* Jiang, Persechini, Zychlinsky, Liu, Perussia, and Young.
— *See* Kwon, Kestler, Lee, Wakulchik, and Young.
Yssel, H. *See* Roncarolo, Yssel, Touraine, Bacchetta, Gebuhrer, De Vries, and Spits.

Z

Zamvil, S. S., Mitchell, D. J., Powell, M. B., Sakai, K., Rothbard, J. B., and Steinman, L. Multiple discrete encephalitogenic epitopes of the autoantigen myelin basic protein include a determinant for I-E class II–restricted T cells. 1181.
Zeff, R. A. *See* Hemmi, Geliebter, Zeff, Melvold, and Nathenson.

Ziegler, S. F., Wilson, C. B., and Perlmutter, R. M. Augmented expression of a myeloid-specific protein tyrosine kinase gene (*hck*) after macrophage activation. 1801.

Zinkernagel, R. M., Rüedi, E., Althage, A., Hengartner, H., and Reimann, G. Thymic selection of H-2-incompatible bone marrow cells in SCID mice. Differences in T help for induction of B cell IgG responses versus cytotoxic T cells. 1187.

__ *See* Frei, Leist, Meager, Gallo, Leppert, Zinkernagel, and Fontana.

Zocchi, M. R. *See* Pantaleo, Zocchi, Ferrini, Poggi, Tambussi, Bottino, Moretta, and Moretta.

Zuñiga-Pflucker, J. C. *See* Tentori, Longo, Zuñiga-Pflucker, Wing, and Kruisbeek.

Zvaifler, N. J. *See* Firestein, Xu, Townsend, Broide, Alvaro-Gracia, Glasebrook, and Zvaifler.

THE JOURNAL OF EXPERIMENTAL MEDICINE

Edited by

Anthony Cerami Zanvil A. Cohn Maclyn McCarty
Carl Nathan Ralph Steinman

Assistant Editors

Alan Aderem Allan R. Goldberg Ellen Pure Helen Vlassara

Advisory Editors

Frederick W. Alt
K. Frank Austen
Baruj Benacerraf
Constantin A. Bona
Patrick Brennan
George Cross
John R. David
Frank J. Dixon
Bernard N. Fields
Shu Man Fu
Emil C. Gotschlich
Alan N. Houghton
Thomas J. Kindt
Seymour J. Klebanoff
Frank Lilly
Philippa Marrack
Lloyd F. Mayer
Hans J. Müller-Eberhard
E. A. McCulloch
Ralph L. Nachman
Robert J. North
Victor Nussenzweig
Michael B. A. Oldstone
William E. Paul
Russell Ross
Pablo Rubinstein
David H. Sachs
Matthew D. Scharff
Hans Schreiber
Benjamin D. Schwartz
Kendall A. Smith
Jonathan Sprent
Timothy A. Springer
Alain Townsend
Giorgio Trinchieri
Zena Werb
Alan F. Williams
Darcy B. Wilson
Henry J. Winn
Samuel D. Wright

VOLUME 168

1988

PUBLISHED MONTHLY BY
THE ROCKEFELLER UNIVERSITY PRESS

COPYRIGHT © 1988 BY THE ROCKEFELLER UNIVERSITY PRESS

CONTENTS

Volume 168 No. 1 July 1, 1988

1 Ermanno Ciccone, Silvano Ferrini, Cristina Bottino, Oriane Viale, Ignazia Prigione, Giuseppe Pantaleo, Giuseppe Tambussi, Alessandro Moretta, and Lorenzo Moretta. A monoclonal antibody specific for a common determinant of the human T cell receptor γ/δ directly activates $CD3^+WT31^-$ lymphocytes to express their functional program(s)

13 Giuseppe Pantaleo, Maria Raffaella Zocchi, Silvano Ferrini, Alessandro Poggi, Giuseppe Tambussi, Cristina Bottino, Lorenzo Moretta, and Allesandro Moretta. Human cytolytic cell clones lacking surface expression of T cell receptor α/β or γ/δ. Evidence that surface structures other than CD3 or CD2 molecules are required for signal transduction

25 Thomas P. Poirier, Michael A. Kehoe, and Edwin H. Beachey. Protective immunity evoked by oral administration of attenuated *aroA Salmonella typhimurium* expressing cloned streptococcal M protein

33 Amy S. Rosenberg, Toshiaki Mizuochi, and Alfred Singer. Evidence for involvement of dual-function T cells in rejection of MHC class I disparate skin grafts. Assessment of MHC class I alloantigens as in vivo helper determinants

47 Arnon Nagler, Peter L. Greenberg, Lewis L. Lanier, and Joseph H. Phillips. The effects of recombinant interleukin 2–activated natural killer cells on autologous peripheral blood hematopoietic progenitors

55 Elliott Sherr, Daniel C. Adelman, Andrew Saxon, Michael Gilly, Randolph Wall, and Neil Sidell. Retinoic acid induces the differentiation of B cell hybridomas from patients with common variable immunodeficiency

73 H. V. Ratajczak, R. B. Sothern, and W. J. M. Hrushesky. Estrous influence on surgical cure of a mouse breast cancer

85 S. Karray, T. DeFrance, H. Merle-Beral, J. Banchereau, P. Debre, and P. Galanaud. Interleukin 4 counteracts the interleukin 2–induced proliferation of monoclonal B cells

95 Douglas L. Fraker, Mark C. Stovroff, Maria J. Merino, and Jeffrey A. Norton. Tolerance to tumor necrosis factor in rats and the relationship to endotoxin tolerance and toxicity

107 Robert E. Mandrell, J. McLeod Griffiss, and Bruce A. Macher. Lipooligosaccharides (LOS) of *Neisseria gonorrhoeae* and *Neisseria meningitidis* have components that are immunochemically similar to precursors of human blood groups antigens. Carbohydrate sequence specificity of the mouse monoclonal antibodies that recognize crossreacting antigens on LOS and human erythrocytes

127 Carol I. Bindon, Geoffrey Hale, Marianne Brüggemann, and Herman Waldmann. Human monoclonal IgG isotypes differ in complement activating function at the level of C4 as well as C1q

143 Richard P. Shimonkevitz and Michael J. Bevan. Split tolerance induced by the intrathymic adoptive transfer of thymocyte stem cells

157 Derek N. J. Hart and Judith L. McKenzie. Isolation and characterization of human tonsil dendritic cells

171 Lisa A. Casten, Pravin Kaumaya, and Susan K. Pierce. Enhanced T cell responses to antigenic peptides targeted to B cell surface immunoglobulin, Ia, or class I molecules

181 Douglas M. Lublin, M. Kathryn Liszewski, Theodore W. Post, Miguel A. Arce, Michelle M. Le Beau, Matthew B. Rebentisch, Richard S. Lemons, Tsukasa Seya, and John P. Atkinson. Molecular cloning and chromosomal localization of human membrane cofactor protein (MCP). Evidence for inclusion in the multigene family of complement-regulatory proteins

195 Prim B. Singh, Richard E. Brown, and Bruce Roser. Class I transplantation antigens in solution in body fluids and in the urine. Individuality signals to the environment

213 Dwight H. Kono, James L. Urban, Suzanna J. Horvath, Dale G. Ando, Raul A. Saavedra, and Leroy Hood. Two minor determinants of myelin basic protein induce experimental allergic encephalomyelitis in SJL/J mice

229 JEFFREY BIRD, NAOMI GALILI, MICHAEL LINK, DANIEL STITES, and JEFFREY SKLAR. Continuing rearrangement but absence of somatic hypermutation in immunoglobulin genes of human B cell precursor leukemia

247 STEVEN M. RUDICH, KENNETH H. ROUX, ROBERT J. WINCHESTER, and PATRICIA K. A. MONGINI. Anti-IgM–mediated B cell signaling. Molecular analysis of ligand binding requisites for human B cell clonal expansion and tolerance

267 ELAINE TUOMANEN, HARRY TOWBIN, GUNTER ROSENFELDER, DIETMAR BRAUN, GORAN LARSON, GUNNAR C. HANSSON, and ROSS HILL. Receptor analogs and monoclonal antibodies that inhibit adherence of *Bordetella pertussis* to human ciliated respiratory epithelial cells

279 DAVID G. RUSSELL and SAMUEL D. WRIGHT. Complement receptor type 3 (CR3) binds to an Arg-Gly-Asp-containing region of the major surface glycoprotein, gp63, of *Leishmania* promastigotes

293 YIDE JIN, J. WAI-KUO SHIH, and IRA BERKOWER. Human T cell response to the surface antigen of hepatitis B (HBsAg). Endosomal and nonendosomal processing pathways are accessible to both endogenous and exogenous antigen

307 DONALD W. MANN, ELIZABETH MCLAUGHLIN-TAYLOR, R. BRUCE WALLACE, and JAMES FORMAN. An immunodominant epitope present in multiple class I MHC molecules and recognized by cytotoxic T lymphocytes

325 JANET M. CONNOLLY, TERRY A. POTTER, EVA-MARIE WORMSTALL, and TED H. HANSEN. The Lyt-2 molecule recognizes residues in the class I α3 domain in allogeneic cytotoxic T cell responses

343 YOSHIYUKI TSUJI, HENRIK CLAUSEN, EDWARD NUDELMAN, TOKIO KAIZU, SEN-ITIROH HAKOMORI, and SHINZO ISOJIMA. Human sperm carbohydrate antigens defined by an antisperm human monoclonal antibody derived from an infertile woman bearing antisperm antibodies in her serum

357 SARA J. BRETT, KEMP B. CEASE, and JAY A. BERZOFSKY. Influences of antigen processing on the expression of the T cell repertoire. Evidence for MHC-specific hindering structures on the products of processing

375 CHAIM HERSHKO and TIMOTHY E. A. PETO. Deferoxamine inhibition of malaria is independent of host iron status

389 WENDY F. DAVIDSON, JACALYN H. PIERCE, STUART RUDIKOFF, and HERBERT C. MORSE, III. Relationships between B cell and myeloid differentiation. Studies with a B lymphocyte progenitor line, HAFTL-1

409 SUMI KOIDE and RALPH M. STEINMAN. Induction of interleukin 1α mRNA during the antigen-dependent interaction of sensitized T lymphoblasts with macrophages

417 GEORGE D. YANCOPOULOS, BARBARA A. MALYNN, and FREDERICK W. ALT. Developmentally regulated and strain-specific expression of murine V_H gene families

BRIEF DEFINITIVE REPORTS

437 TOSHIAKI MIZUOCHI, LUCIO TENTORI, SUSAN O. SHARROW, ADA M. KRUISBEEK, and ALFRED SINGER. Differentiation of Ia-reactive $CD8^+$ murine T cells does not require Ia engagement. Implications for the role of CD4 and CD8 accessory molecules in T cell differentiation

443 SEIJIRO OKUSAWA, KIM B. YANCEY, JOS W. M. VAN DER MEER, STEFAN ENDRES, GERHARD LONNEMANN, KATHY HEFTER, MICHAEL M. FRANK, JOHN F. BURKE, CHARLES A. DINARELLO, and JEFFREY A. GELFAND. C5a stimulates secretion of tumor necrosis factor from human mononuclear cells in vitro. Comparison with secretion of interleukin 1β and interleukin 1α

449 KARL FREI, THOMAS P. LEIST, ANTONY MEAGER, PAOLO GALLO, DAVID LEPPERT, ROLF M. ZINKERNAGEL, and ADRIANO FONTANA. Production of B cell stimulatory factor 2 and interferon in the central nervous system during viral meningitis and encephalitis. Evaluation in a murine model infection and in patients

455 CORRECTION

457 CORRECTION

459 CORRECTION

Volume 168 No. 2 August 1, 1988

463 TRANG HOANG, ANDRÉ HAMAN, OTELINDA GONCALVES, FRANÇOIS LETENDRE, MIREILLE MATHIEU, GORDON G. WONG, and STEVEN C. CLARK. Interleukin 1 enhances growth factor-dependent proliferation of the clonogenic cells in acute myeloblastic leukemia and of normal human primitive hemopoietic precursors

475 SHOSHANA LEVY, EILEEN MENDEL, SHINICHIRO KON, ZAFRIRA AVNUR, and RONALD LEVY. Mutational hot spots in Ig V region genes of human follicular lymphomas

491 CHRISTINA BOTTINO, GIUSEPPE TAMBUSSI, SILVANO FERRINI, ERMANNO CICCONE, PAOLA VARESE, MARIA CRISTINA MINGARI, LORENZO MORETTA, and ALESSANDRO MORETTA. Two subsets of human T lymphocytes expressing γ/δ antigen receptor are identifiable by monoclonal antibodies directed to two distinct molecular forms of the receptor

507 MARK ACHTMAN, MICHAEL NEIBERT, BRIAN A. CROWE, WOLFGANG STRITTMATTER, BARICA KUSECEK, EBERHARDT WEYSE, MICHAEL J. WALSH, BARBARA SLAWIG, GIOVANNA MORELLI, ALBRECHT MOLL, and MILAN BLAKE. Purification and characterization of eight class 5 outer membrane protein variants from a clone of *Neisseria meningitidis* serogroup A

527 SUCHARIT BHAKDI, MARION MUHLY, UTE MANNHARDT, FERDINAND HUGO, KARIN KLAPETTEK, CHRISTIAN MUELLER-ECKHARDT, and LADISLAUS ROKA. Staphylococcal α toxin promotes blood coagulation via attack on human platelets

543 RAFAEL FERNANDEZ-BOTRAN, VIRGINIA M. SANDERS, TIMOTHY R. MOSMANN, and ELLEN S. VITETTA. Lymphokine-mediated regulation of the proliferative response of clones of T helper 1 and T helper 2 cells

559 MICHAEL B. A. OLDSTONE, J. LINDSAY WHITTON, HANNA LEWICKI, and ANTOINETTE TISHON. Fine dissection of a nine amino acid glycoprotein epitope, a major determinant recognized by lymphocytic choriomeningitis virus-specific class I-restricted H-2D^b cytotoxic T lymphocytes

571 MARK L. RICHARDS, JOHN F. MARCELLETTI, and DAVID H. KATZ. IgE-antigen complexes enhance FcεR and Ia expression by murine B lymphocytes

589 HYUN DO JEONG and JUDY M. TEALE. Comparison of the fetal and adult functional B cell repertoires by analysis of V_H gene family expression

605 SARA CHAFFEE, JANET M. LEEDS, THOMAS J. MATTHEWS, KENT J. WEINHOLD, MICHAEL SKINNER, DANI P. BOLOGNESI, and MICHAEL S. HERSHFIELD. Phenotypic variation in the response to the human immunodeficiency virus among derivatives of the CEM T and WIL-2 B cell lines

623 ROBERT A. YETTER, R. MARK L. BULLER, JOON S. LEE, KAREN L. ELKINS, DONALD E. MOSIER, TORGNY N. FREDRICKSON, and HERBERT C. MORSE, III. CD4$^+$ T cells are required for development of a murine retrovirus-induced immunodeficiency syndrome (MAIDS)

637 PETER NAWROTH, DEAN HANDLEY, GARY MATSUEDA, ROBERT DE WAAL, HERWIG GERLACH, DIETMAR BLOHM, and DAVID STERN. Tumor necrosis factor/cachetin-induced intravascular fibrin formation in Meth A fibrosarcomas

649 VICTORIA LEY, NORMA W. ANDREWS, EDITH S. ROBBINS, and VICTOR NUSSENZWEIG. Amastigotes of *Trypanosoma cruzi* sustain an infective cycle in mammalian cells

661 MEGAN SYKES, MICHAEL A. SHEARD, and DAVID H. SACHS. Effects of T cell depletion in radiation bone marrow chimeras. II. Requirement for allogeneic T cells in the reconstituting bone marrow inoculum for subsequent resistance to breaking of tolerance

675 DIANA BORASCHI, LUCIANO NENCIONI, LUIGI VILLA, STEFANO CENSINI, PAOLA BOSSÙ, PAOLO GHIARA, RIVO PRESENTINI, FABIO PERIN, DANIELA FRASCA, GINO DORIA, GUIDO FORNI, TIZIANA MUSSO, MIRELLA GIOVARELLI, PIETRO GHEZZI, RICCARDO BERTINI, HUGO O. BESEDOVSKY, ADRIANA DEL REY, JEAN D. SIPE, GUIDO ANTONI, SERGIO SILVESTRI, and ALDO TAGLIABUE. In vivo stimulation and restoration of the immune response by the noninflammatory fragment 163-171 of human interleukin 1β

687 THOMAS J. MERCOLINO, LARRY W. ARNOLD, LEE A. HAWKINS, and GEOFFREY HAUGHTON. Normal mouse peritoneum contains a large population of Ly-1$^+$ (CD5) B cells that recognize phosphatidyl choline. Relationship to cells that secrete hemolytic antibody specific for autologous erythrocytes

699 ELVIN A. KABAT, JERRY LIAO, ELLIOTT F. OSSERMAN, ANDRZEJ GAMIAN, FRANCIS MICHON, and HAROLD J. JENNINGS. The epitope associated with the binding of the capsular polysaccharide of the group B meningococcus and of *Escherichia coli* K1 to a human monoclonal macroglobulin, IgM^{NOV}

713 SEIJI HABA and ALFRED NISONOFF. Immunological responsiveness of neonatal A/J mice to isotypic determinants of syngeneic IgE

725 KEVIN T. HOGAN, NAOKI SHIMOJO, SCOTT F. WALK, VICTOR H. ENGELHARD, W. LEE MALOY, JOHN E. COLIGAN, and WILLIAM E. BIDDISON. Mutations in the α2 helix of HLA-A2 affect presentation but do not inhibit binding of influenza virus matrix peptide

737 JONATHAN R. KELLER, CHARLES MANTEL, GARWIN K. SING, LARRY R. ELLINGSWORTH, SANDRA K. RUSCETTI, and FRANCIS W. RUSCETTI. Transforming growth factor β1 selectively regulates early murine hematopoietic progenitors and inhibits the growth of IL-3-dependent myeloid leukemia cell lines

751 ROBERT L. MEDCALF, EGBERT K. O. KRUITHOF, and WOLF-DIETER SCHLEUNING. Plasminogen activator inhibitor 1 and 2 are tumor necrosis factor/cachectin-responsive genes

761 FRANS HOCHSTENBACH, CHRISTINA PARKER, JOANNE MCLEAN, VOLKMAR GIESELMANN, HAMID BAND, ILAN BANK, LEONARD CHESS, HERGEN SPITS, JACK L. STROMINGER, J. G. SEIDMAN, and MICHAEL B. BRENNER. Characterization of a third form of the human T cell receptor γ/δ

BRIEF DEFINITIVE REPORTS

777 T. J. YOO, SUNG-YOON KIM, J. M. STUART, R. A. FLOYD, G. A. OLSON, M. A. CREMER, and A. H. KANG. Induction of arthritis in monkeys by immunization with type II collagen

783 THOMAS J. SANTORO, DAN H. MORRIS, ROBERT C. MURPHY, and RODNEY C. BAKER. Aberrant production of leukotriene C_4 by macrophages from autoimmune-prone mice

789 DANIEL B. MAGILAVY and JAY L. ROTHSTEIN. Spontaneous production of tumor necrosis factor α by Kupffer cells of MRL/lpr mice

795 ELLEN PURÉ, KAYO INABA, and JOSHUA METLAY. Lymphokine production by murine T cells in the mixed leukocyte reaction

801 MARYSE GUEGUEN, MICHÈLE MEUNIER-ROTIVAL, OLIVIER BERNARD, and FERNANDO ALVAREZ. Anti-liver kidney microsome antibody recognizes a cytochrome P450 from the IID subfamily

807 SUSAN M. L. LIM and DAVID J. G. WHITE. Long-term residence of a graft is an insufficient stimulus for the induction of tolerance. Investigating the role of cyclosporine in class I-disparate heart grafts in the rat

811 MUNEO MIYAMA-INABA, SHO-ICHI KUMA, KAYO INABA, HAJIME OGATA, HIROSHI IWAI, RYOJI YASUMIZU, SHIGERU MURAMATSU, RALPH M. STEINMAN, and SUSUMU IKEHARA. Unusual phenotype of B cells in the thymus of normal mice

817 HUBERT SCHREZENMEIER, GUDRUN AHNERT-HILGER, and BERNHARD FLEISCHER. Inactivation of a T cell receptor-associated GTP-binding protein by antibody-induced modulation of the T cell receptor/CD3 complex

Volume 168 No. 3 September 1, 1988

823 JEAN-MARIE BUERSTEDDE, LARRY R. PEASE, ALLAN E. NILSON, MICHAEL P. BELL, CAROL CHASE, GERTRUD BUERSTEDDE, and DAVID J. MCKEAN. Regulation of murine MHC class II molecule expression. Identification of A_β residues responsible for allele-specific cell surface expression

839 YASUO ISHIDA and THOMAS M. CHUSED. Heterogeneity of lymphocyte calcium metabolism is caused by T cell-specific calcium-sensitive potassium channel and sensitivity of the calcium ATPase pump to membrane potential

853 DEBORAH A. LEBMAN and ROBERT L. COFFMAN. Interleukin 4 causes isotype switching to IgE in T cell-stimulated clonal B cell cultures

863 SEIJI MITA, NOBUYUKI HARADA, SHOJIRO NAOMI, YASUMICHI HITOSHI, KIYOSHI SAKAMOTO, MASANOBU AKAGI, AKIRA TOMINAGA, and KIYOSHI TAKATSU. Receptors for T cell-replacing factor/interleukin 5. Specificity, quantitation, and its implication

879 KENICHI KOIKE, TATSUTOSHI NAKAHATA, MINEO TAKAGI, TOSHIMI KOBAYASHI, AKIRA ISHIGURO, KOCHIRO TSUJI, KUNIAKI NAGANUMA, AKIRA OKANO, YUKIO AKIYAMA, and TARO AKABANE. Synergism of BSF-2/interleukin 6 and interleukin 3 on development of multipotential hemopoietic progenitors in serum-free culture

891 PHILIPPE BENAROCH, ELENA GEORGATSOU, and GUY BORDENAVE. Cellular induction of chronic allotype suppression of IgG2a in $Igh^{b/b}$ homozygous mice and its abrogation by in vivo treatment with anti-CD8 monoclonal antibody

905 HOWARD V. RAFF, PEGGY J. SISCOE, EDITH A. WOLFF, GRACE MALONEY, and WALTER SHUFORD. Human monoclonal antibodies to group B streptococcus. Reactivity and in vivo protection against multiple serotypes

919 LESZEK K. BORYSIEWICZ, JULIAN K. HICKLING, SHEK GRAHAM, JOHN SINCLAIR, MARTIN P. CRANAGE, GEOFFREY L. SMITH, and J. G. PATRICK SISSONS. Human cytomegalovirus-specific cytotoxic T cells. Relative frequency of stage-specific CTL recognizing the 72-kD immediate early protein and glycoprotein B expressed by recombinant vaccinia virus

933 KATSUSHI TOKUNAGA, G. SAUERACKER, P. H. KAY, F. T. CHRISTIANSEN, R. ANAND, and R. L. DAWKINS. Extensive deletions and insertions in different MHC supratypes detected by pulsed field gel electrophoresis

941 ALICE B. GOTTLIEB, ANDREW D. LUSTER, DAVID N. POSNETT, and D. MARTIN CARTER. Detection of a γ interferon-induced protein IP-10 in psoriatic plaques

949 CAROLYN MOLD, BONNIE M. BRADT, GLEN R. NEMEROW, and NEIL R. COOPER. Epstein-Barr virus regulates activation and processing of the third component of complement

971 HOWARD M. FILLIT, MILAN BLAKE, CHRISTA MACDONALD, and MACLYN MCCARTY. Immunogenicity of liposome-bound hyaluronate in mice. At least two different antigenic sites on hyaluronate are identified by mouse monoclonal antibodies

983 WILLIAM W. RUEHL, CARL F. MARRS, ROSEMARY FERNANDEZ, STANLEY FALKOW, and GARY K. SCHOOLNIK. Purification, characterization, and pathogenicity of *Moraxella bovis* pili

1003 TAKASHI SAITO, FRANS HOCHSTENBACH, SUZANA MARUSIC-GALESIC, ADA M. KRUISBEEK, MICHAEL BRENNER, and RONALD N. GERMAIN. Surface expression of only γδ and/or αβ T cell receptor heterodimers by cells with four (α, β, γ, δ) functional receptor chains

1021 ALAN J. KORMAN, SUZANA MARUSIC-GALESIC, DAVID SPENCER, ADA M. KRUISBEEK, and DAVID H. RAULET. Predominant variable region gene usage by γ/δ T cell receptor-bearing cells in the adult thymus

1041 R. L. GRIFFITH, G. T. VIRELLA, H. C. STEVENSON, and M. F. LOPES-VIRELLA. Low density lipoprotein metabolism by human macrophages activated with low density lipoprotein immune complexes. A possible mechanism of foam cell formation

1061 BARTON F. HAYNES, MARGARET E. MARTIN, HELEN H. KAY, and JOANNE KURTZBERG. Early events in human T cell ontogeny. Phenotypic characterization and immunohistologic localization of T cell precursors in early human fetal tissues

1081 MING-ZONG LAI, SHU-YING HUANG, THOMAS J. BRINER, JEAN-GERARD GUILLET, JOHN A. SMITH, and MALCOLM L. GEFTER. T cell receptor gene usage in the response to λ repressor cI protein. An apparent bias in the usage of a Vα gene element

1099 SUSAN C. WALLICK, ELVIN A. KABAT, and SHERIE L. MORRISON. Glycosylation of a V_H residue of a monoclonal antibody against α(1→6) dextran increases its affinity for antigen

1111 CARLO-FEDERICO PERNO, ROBERT YARCHOAN, DAVID A. COONEY, NEIL R. HARTMAN, SUZANNE GARTNER, MIKULAS POPOVIC, ZHANG HAO, THERESA L. GERRARD, YVONNE A. WILSON, DAVID G. JOHNS, and SAMUEL BRODER. Inhibition of human immunodeficiency virus (HIV-1/HTLV-III_{BA-L}) replication in fresh and cultured human peripheral blood monocytes/macrophages by azidothymidine and related 2′,3′-dideoxynucleosides

1127 HELEN M. COOPER, GIAMPIETRO CORRADIN, and YVONNE PATERSON. The Heme moiety of cytochrome *c* is an autoreactive Ir gene-restricted T cell epitope

1145 BARBARA E. BIERER, ANDREW PETERSON, JOAN C. GORGA, STEVEN H. HERRMANN, and STEVEN J. BURAKOFF. Synergistic T cell activation via the physiological ligands for CD2 and the T cell receptor

BRIEF DEFINITIVE REPORTS

1157 ERIC J. BERNHARD, AI-XUAN T. LE, JAMES A. BARBOSA, ELIZABETH LACY, and VICTOR H. ENGELHARD. Cytotoxic T lymphocytes from HLA-A2 transgenic mice specific for HLA-A2 expressed on human cells

1163 M. J. CANNON, P. J. M. OPENSHAW, and B. A. ASKONAS. Cytotoxic T cells clear virus but augment lung pathology in mice infected with respiratory syncytial virus

1169 RICHARD J. JOHNSON, WILLIAM G. COUSER, CHARLES E. ALPERS, MARGRET VISSERS, MATTHIAS SCHULZE, and SEYMOUR J. KLEBANOFF. The human neutrophil serine proteinases, elastase and cathepsin G, can mediate glomerular injury in vivo

1175 JEFFREY M. PURKERSON, MICHAEL NEWBERG, GWENDOLYN WISE, KEVIN R. LYNCH, and PETER C. ISAKSON. Interleukin 5 and interleukin 2 cooperate with interleukin 4 to induce IgG1 secretion from anti-Ig-treated B cells

1181 SCOTT S. ZAMVIL, DENNIS J. MITCHELL, MARIANNE B. POWELL, KOICHIRO SAKAI, JONATHON B. ROTHBARD, and LAWRENCE STEINMAN. Multiple discrete encephalitogenic epitopes of the autoantigen myelin basic protein include a determinant for I-E class II-restricted T cells

1187 R. M. ZINKERNAGEL, E. RÜEDI, A. ALTHAGE, H. HENGARTNER, and G. REIMANN. Thymic selection of H-2-incompatible bone marrow cells in SCID mice. Differences in T help for induction of B cell IgG responses versus cytotoxic T cells

1193 S. H. LEE, P. R. CROCKER, S. WESTABY, N. KEY, D. Y. MASON, S. GORDON, and D. J. WEATHERALL. Isolation and immunocytochemical characterization of human bone marrow stromal macrophages in hemopoietic clusters

1199 RICHARD LUCIUS, NGOZI ERONDU, ANDREA KERN, and JOHN E. DONELSON. Molecular cloning of an immunodominant antigen of *Onchocerca volvulus*

1205 IVAN STAMENKOVIC and BRIAN SEED. CD19, the earliest differentiation antigen of the B cell lineage, bears three extracellular immunoglobulin-like domains and an Epstein-Barr virus-related cytoplasmic tail

Volume 168 No. 4 October 1, 1988

1211 ALAIN TOWNSEND, JUDY BASTIN, KEITH GOULD, GEORGE BROWNLEE, MARION ANDREW, BARBARA COUPAR, DAVID BOYLE, SANG CHAN, and GEOFF SMITH. Defective presentation to class I-restricted cytotoxic T lymphocytes in vaccinia-infected cells is overcome by enhanced degradation of antigen

1225 MARION G. PETERS, JULIAN L. AMBRUS, JR., ANTHONY S. FAUCI, and ERIC J. BROWN. The Bb fragment of complement factor B acts as a B cell growth factor

1237 JOHN E. HAMBOR, MARK L. TYKOCINSKI, and DAVID R. KAPLAN. Functional consequences of antisense RNA-mediated inhibition of CD8 surface expression in a human T cell clone

1247 MICHELLE LETARTE, SONIA VERA, ROSETTE TRAN, JANE B. L. ADDIS, RUSSELL J. ONIZUKA, ELIZABETH J. QUACKENBUSH, C. VICTOR JONGENEEL, and RODERICK R. MCINNES. Common acute lymphocytic leukemia antigen is identical to neutral endopeptidase

1255 DENNIS HOURCADE, DAWN R. MIESNER, JOHN P. ATKINSON, and V. MICHAEL HOLERS. Identification of an alternative polyadenylation site in the human C3b/C4b receptor (complement receptor type 1) transcriptional unit and prediction of a secreted form of complement receptor type 1

1271 I. Gresser, C. Maury, F. Vignaux, O. Haller, F. Belardelli, and M. G. Tovey. Antibody to mouse interferon α/β abrogates resistance to the multiplication of Friend erythroleukemia cells in the livers of allogeneic mice

1293 Giovanni Camussi, Ciro Tetta, Federico Bussolino, and Corrado Baglioni. Synthesis and release of platelet-activating factor is inhibited by plasma α_1-proteinase inhibitor or α_1-antichymotrypsin and is stimulated by proteinases

1307 Cathleen Magowan, Wendy Wollish, Linda Anderson, and James Leech. Cytoadherence by *Plasmodium falciparum*–infected erythrocytes is correlated with the expression of a family of variable proteins on infected erythrocytes

1321 Thierry Defrance, Béatrice Vanbervliet, Jean-Pierre Aubry, and Jacques Banchereau. Interleukin 4 inhibits the proliferation but not the differentiation of activated human B cells in response to interleukin 2

1339 Stacy E. Ferguson, Stuart Rudikoff, and Barbara A. Osborne. Interaction and sequence diversity among T15 V_H genes in CBA/J mice

1351 M. Teresa de Magistris, Miriam Romano, Sandra Nuti, Rino Rappuoli, and Aldo Tagliabue. Dissecting human T cell responses against *Bordetella* species

1363 J. Manz, K. Denis, O. Witte, R. Brinster, and U. Storb. Feedback inhibition of immunoglobulin gene rearrangement by membrane μ, but not by secreted μ heavy chains

1383 Marie Pierre Font, Zhu Chen, Jean Christophe Bories, Nelly Duparc, Pascale Loiseau, Laurent Degos, Howard Cann, Daniel Cohen, Jean Dausset, and Francois Sigaux. The Vγ locus of the human T cell receptor γ gene. Repertoire polymorphism of the first variable gene segment subgroup

1395 Gerald E. Hancock, Gilla Kaplan, and Zanvil A. Cohn. Keratinocyte growth regulation by the products of immune cells

1403 Sharon M. Wahl, Denise A. Hunt, Geetha Bansal, Nancy McCartney-Francis, Larry Ellingsworth, and Janice B. Allen. Bacterial cell wall–induced immunosuppression. Role of transforming growth factor β

1419 Kyogo Itoh, Chris D. Platsoucas, and Charles M. Balch. Autologous tumor-specific cytotoxic T lymphocytes in the infiltrate of human metastatic melanomas. Activation by interleukin 2 and autologous tumor cells, and involvement of the T cell receptor

1443 Yoshitaka Hirayama, Kayo Inaba, Muneo Inaba, Takuma Kato, Makoto Kitaura, Tomohide Hosokawa, Susumu Ikehara, and Shigeru Muramatsu. Neuraminidase-treated macrophages stimulate allogenic $CD8^+$ T cells in the presence of exogenous interleukin 2

1457 Soo Young Yang, Stephen M. Denning, Shinichi Mizuno, Bo Dupont, and Barton F. Haynes. A novel activation pathway for mature thymocytes. Costimulation of CD2 (T,p50) and CD28 (T,p44) induces autocrine interleukin 2/interleukin 2 receptor–mediated cell proliferation

1469 Petter Höglund, Hans-Gustaf Ljunggren, Claes Öhlén, Lars Ährlund-Richter, George Scangos, Charles Bieberich, Gilbert Jay, George Klein, and Klas Kärre. Natural resistance against lymphoma grafts conveyed by H-$2D^d$ transgene to C57BL mice

BRIEF DEFINITIVE REPORTS

1475 Seiji Minota, Bonnie Cameron, William J. Welch, and John B. Winfield. Autoantibodies to the constitutive 73-kD member of the hsp70 family of heat shock proteins in systemic lupus erythematosus

1481 Ami Okada, Ilan Bank, Linda Rogozinski, Yoshihiro Takihara, Tak W. Mak, Leonard Chess, and Frederick W. Alt. Structure of the γ/δ T cell receptor of a human thymocyte clone

1487 Dierdre A. Herrington, Robert H. Hall, Genevieve Losonsky, John J. Mekalanos, Ronald K. Taylor, and Myron M. Levine. Toxin, toxin-coregulated pili, and the *toxR* regulon are essential for *Vibrio cholerae* pathogenesis in humans

1493 Robert L. Barker, Gerald J. Gleich, and Larry R. Pease. Acidic precursor revealed in human eosinophil granule major basic protein cDNA

1499 GEORGES E. GRAU, VINCENT KINDLER, PIERRE-FRANCOIS PIGUET, PAUL-HENRI LAMBERT, and PIERRE VASSALLI. Prevention of experimental cerebral malaria by anticytokine antibodies. Interleukin 3 and granulocyte/macrophage colony-stimulating factor are intermediates in increased tumor necrosis factor production and macrophage accumulation

1505 A. ROOMI NUSRAT, SAMUEL D. WRIGHT, ALAN A. ADEREM, RALPH M. STEINMAN, and ZANVIL A. COHN. Properties of isolated red pulp macrophages from mouse spleen

1511 HELMUT SAUTER and CHRISTOPHER J. PAIGE. B cell progenitors have different growth requirements before and after immunoglobulin heavy chain commitment

Volume 168 No. 5 November 1, 1988

1523 MICHEL STREULI, NEIL X. KRUEGER, LAURIE R. HALL, STUART F. SCHLOSSMAN, and HARUO SAITO. A new member of the immunoglobulin superfamily that has a cytoplasmic region homologous to the leukocyte common antigen

1531 ELIZABETH MELLINS, BENJAMIN ARP, BARBARA OCHS, HENRY ERLICH, and DONALD PIOUS. A single amino acid substitution in the human histocompatibility leukocyte antigen DR3 β chain selectively alters antigen presentation

1539 SUN-SANG J. SUNG, LAWRENCE K. L. JUNG, JAY A. WALTERS, WEI CHEN, CHANG YI WANG, and SHU MAN FU. Production of tumor necrosis factor/cachectin by human B cell lines and tonsillar B cells

1553 JONATHAN D. KATZ, KAZUNORI OHNISHI, LAURA T. LEBOW, and BENJAMIN BONAVIDA. The SJL/J T cell response to both spontaneous and transplantable syngeneic reticulum cell sarcoma is mediated predominantly by the Vβ17a$^+$ T cell clonotype

1563 YUJI SAITO, HISATAKA SABE, NOBORU SUZUKI, SHIGERU KONDO, TOSHIHIKO OGURA, AKIRA SHIMIZU, and TASUKU HONJO. A larger number of L chains (Tac) enhance the association rate of interleukin 2 to the high affinity site of the interleukin 2 receptor

1573 GARY S. FIRESTEIN, WEI-DONG XU, KAY TOWNSEND, DAVID BROIDE, JOSE ALVARO-GRACIA, ANDREW GLASEBROOK, and NATHAN J. ZVAIFLER. Cytokines in chronic inflammatory arthritis. I. Failure to detect T cell lymphokines (interleukin 2 and interleukin 3) and presence of macrophage colony-stimulating factor (CSF-1) and a novel mast cell growth factor in rheumatoid synovitis

1587 MASAAKI MIYAZAWA, JANE NISHIO, and BRUCE CHESEBRO. Genetic control of T cell responsiveness to the Friend murine leukemia virus envelope antigen. Identification of class II loci of the H-2 as immune response genes

1607 WILLIAM L. CARROLL, CHARLIE O. STARNES, RONALD LEVY, and SHOSHANA LEVY. Alternative V_κ gene rearrangements in a murine B cell lymphoma. An explanation for idiotypic heterogeneity

1621 MARTA CEBRIÁN, ENRIQUETA YAGÜE, MERCEDES RINCÓN, MIGUEL LÓPEZ-BOTET, MANUEL O. DE LANDÁZURI, and FRANCISCO SÁNCHEZ-MADRID. Triggering of T cell proliferation through AIM, an activation inducer molecule expressed on activated human lymphocytes

1639 MARY E. CRONIN, LORI A. LOVE, FREDERICK W. MILLER, PATRICK R. MCCLINTOCK, and PAUL H. PLOTZ. The natural history of encephalomyocarditis virus–induced myositis and myocarditis in mice. Viral persistence demonstrated by in situ hybridization

1649 ANGELA GRANELLI-PIPERNO. In situ hybridization for interleukin 2 and interleukin 2 receptor mRNA in T cells activated in the presence or absence of cyclosporin A

1659 FRANCIEN T. M. ROTTEVEEL, INGRID KOKKELINK, RENÉ A. W. VAN LIER, BART KUENEN, ANTHONY MEAGER, FRANK MIEDEMA, and CORNELIS J. LUCAS. Clonal analysis of functionally distinct human CD4$^+$ T cell subsets

1675 PHILLIP SCOTT, PATRICIA NATOVITZ, ROBERT L. COFFMAN, EDWARD PEARCE, and ALAN SHER. Immunoregulation of cutaneous leishmaniasis. T cell lines that transfer protective immunity or exacerbation belong to different T helper subsets and respond to distinct parasite antigens

1685 CANDACE J. STRANG, SYLVESTRE CHOLIN, JOCELYN SPRAGG, ALVIN E. DAVIS, III, EVELYN E. SCHNEEBERGER, VIRGINIA H. DONALDSON, and FRED S. ROSEN. Angioedema induced by a peptide derived from complement component C2

1699 LLOYD B. KLICKSTEIN, THOMAS J. BARTOW, VOJISLAV MILETIC, LAUREL D. RABSON, JOHN A. SMITH, and DOUGLAS T. FEARON. Identification of distinct C3b and C4b recognition sites in the human C3b/C4b receptor (CR1, CD35) by deletion mutagenesis

1719 DAVID R. LEE, RONALD J. RUBOCKI, WEN-RONG LIE, and TED H. HANSEN. The murine MHC class I genes, *H-2D^q* and *H-2L^q*, are strikingly homologous to each other, *H-2L^d*, and two genes reported to encode tumor-specific antigens

1741 LUCIO TENTORI, DAN L. LONGO, JUAN C. ZUÑIGA-PFLUCKER, CHRIS WING, and ADA M. KRUISBEEK. Essential role of the interleukin 2–interleukin 2 receptor pathway in thymocyte maturation in vivo

1749 JOHN S. PEELER, DAVID G. CALLANAN, MARTHA W. LUCKENBACH, and JERRY Y. NIEDERKORN. Presentation of the H-Y antigen on Langerhans' cell–negative corneal grafts downregulates the cytotoxic T cell response and converts responder strain mice into phenotypic nonresponders

1767 DAVID L. ROSENSTREICH, JOHN H. TU, PETER R. KINKADE, INGRID MAURER-FOGY, JULIUS KAHN, RANDALL W. BARTON, and PETER R. FARINA. A human urine–derived interleukin 1 inhibitor. Homology with deoxyribonuclease I

1781 JULIE M. VOGEL, ANN CRANMER DAVIS, DENISE M. MCKINNEY, MINNIE MCMILLAN, W. JOHN MARTIN, and ROBERT S. GOODENOW. Molecular characterization of the C3HfB/HeN *H-2K^{km2}* mutation. Implications for the molecular basis of alloreactivity

1801 STEVEN F. ZIEGLER, CHRISTOPHER B. WILSON, and ROGER M. PERLMUTTER. Augmented expression of a myeloid-specific protein tyrosine kinase gene (*hck*) after macrophage activation

1811 GILLA KAPLAN, SUMAN LAAL, GIULIA SHEFTEL, ASMA NUSRAT, INDIRA NATH, N. K. MATHUR, R. S. MISHRA, and ZANVIL A. COHN. The nature and kinetics of a delayed immune response to purified protein derivative of tuberculin in the skin of lepromatous leprosy patients

1825 KYOKO HAYAKAWA and RICHARD R. HARDY. Murine CD4$^+$ T cell subsets defined

1839 BYOUNG S. KWON, DANIEL KESTLER, ESTHER LEE, MARK WAKULCHIK, and JOHN DING-E YOUNG. Isolation and sequence analysis of serine protease cDNAs from mouse cytolytic T lymphocytes

1855 JORGE R. OKSENBERG, AMRIT K. JUDD, CYNTHIA KO, MAE LIM, ROSMARY FERNANDEZ, GARY K. SCHOOLNIK, and LAWRENCE STEINMAN. MHC-restricted recognition of immunogenic T cell epitopes of pertussis toxin reveals determinants in man distinct from the ADP-ribosylase active site

1865 NICHOLAS A. PAWLOWSKI, GILLA KAPLAN, ELEANOR ABRAHAM, and ZANVIL A. COHN. The selective binding and transmigration of monocytes through the junctional complexes of human endothelium

1883 L. M. WETZLER, M. S. BLAKE, and E. C. GOTSCHLICH. Characterization and specificity of antibodies to protein I of *Neisseria gonorrhoeae* produced by injection with various protein I–adjuvant preparations

1899 JEFFREY A. BLUESTONE, RANDY Q. CRON, MELISSA COTTERMAN, BRONWYN A. HOULDEN, and LOUIS A. MATIS. Structure and specificity of T cell receptor γ/δ on major histocompatibility complex antigen–specific CD3$^+$, CD4$^-$, CD8$^-$ T lymphocytes

BRIEF DEFINITIVE REPORTS

1917 J. RIPOCHE, J. A. MITCHELL, A. ERDEI, C. MADIN, B. MOFFATT, T. MOKOENA, S. GORDON, and R. B. SIM. Interferon γ induces synthesis of complement alternative pathway proteins by human endothelial cells in culture

1923 MARION R. FUNG, GRACE JU, and WARNER C. GREENE. Co-internalization of the p55 and p70 subunits of the high affinity human interleukin 2 receptor. Evidence for a stable ternary receptor complex

1929 Sara A. Michie, L. A. Kirkpatrick, and Robert V. Rouse. Rare peripheral T cells migrate to and persist in normal mouse thymus

1935 Jack R. Bennink and Jonathan W. Yewdell. Murine cytotoxic T lymphocyte recognition of individual influenza virus proteins. High frequency of nonresponder MHC class I alleles

1941 Dieter Kabelitz and Peter Conradt. Identification of $CD2^-/CD3^+$ T cells in fetal human tissue

1947 Tom H. M. Ottenhoff, Birhane Kale Ab, Jan D. A. Van Embden, Jelle E. R. Thole, and Rolf Kiessling. The recombinant 65-kD heat shock protein of *Mycobacterium bovis* bacillus Calmette-Guerin/*M. tuberculosis* is a target molecule for $CD4^+$ cytotoxic T lymphocytes that lyse human monocytes

Volume 168 No. 6 December 1, 1988

1953 Patrick Salmon, Rene Olivier, Yves Riviere, Edith Brisson, Jean-Claude Gluckman, Marie-Paule Kieny, Luc Montagnier, and David Klatzmann. Loss of CD4 membrane expression and CD4 mRNA during acute human immunodeficiency virus replication

1971 Bernard J. Morley, Kingsley N. Chin, Marianne E. Newton, and Arthur Weiss. The lysine residue in the membrane-spanning domain of the β chain is necessary for cell surface expression of the T cell antigen receptor

1979 Samuele E. Burastero, Paolo Casali, Ronald L. Wilder, and Abner Louis Notkins. Monoreactive high affinity and polyreactive low affinity rheumatoid factors are produced by $CD5^+$ B cells from patients with rheumatoid arthritis

1993 Lily Shiue, Scott D. Gorman, and Jane R. Parnes. A second chain of human CD8 is expressed on peripheral blood lymphocytes

2007 Jay L. Rothstein, Thomas F. Lint, and Hans Schreiber. Tumor necrosis factor/cachectin. Induction of hemorrhagic necrosis in normal tissue requires the fifth component of complement (C5)

2023 Gamal E. Osman, Henry H. Wortis, and Peter H. Brodeur. Strain variation in the frequency of Abelson murine leukemia virus–transformed fetal liver pre-B cells bearing complete immunoglobulin heavy chain rearrangements

2031 Robert J. North, Russell H. Neubauer, James J. H. Huang, Robert C. Newton, and Scott E. Loveless. Interleukin 1–induced, T cell–mediated regression of immunogenic murine tumors. Requirement for an adequate level of already acquired host concomitant immunity

2045 Frances Gotch, Andrew McMichael, and Jonathan Rothbard. Recognition of influenza A matrix protein by HLA-A2-restricted cytotoxic T lymphocytes. Use of analogues to orientate the matrix peptide in the HLA-A2 binding site

2059 Elizabeth A. Hurley and David A. Thorley-Lawson. B cell activation and the establishment of Epstein-Barr virus latency

2077 Philippe Moingeon, Andres Alcover, Linda K. Clayton, Hsiu-Ching Chang, Catherine Transy, and Ellis L. Reinherz. Expression of a functional CD3-Ti antigen/MHC receptor in the absence of surface CD2. Analysis with clonal Jurkat cell mutants

2091 Luciano Adorini, Ettore Appella, Gino Doria, and Zoltan A. Nagy. Mechanisms influencing the immunodominance of T cell determinants

2105 Heinz-P. Schultheiss, Uwe Kühl, Igor Janda, Bärbel Melzner, Gabriele Ulrich, and Martin Morad. Antibody-mediated enhancement of calcium permeability in cardiac myocytes

2121 John Swanson, Osmar Barrera, James Sola, and John Boslego. Expression of outer membrane protein II by gonococci in experimental gonorrhea

2131 Brigitte Müller and Michael Reth. Ordered activation of the Igλ locus in Abelson B cell lines

2139 MARIA GRAZIA RONCAROLO, HANS YSSEL, JEAN-LOUIS TOURAINE, ROSA BACCHETTA, LUCETTE GEBUHRER, JAN E. DE VRIES, and HERGEN SPITS. Antigen recognition by MHC-incompatible cells of a human mismatched chimera

2153 MAKOTO OWHASHI and ELLEN HEBER-KATZ. Protection from experimental allergic encephalomyelitis conferred by a monoclonal antibody directed against a shared idiotype on rat T cell receptors specific for myelin basic protein

2165 CHARLES S. VIA and GENE M. SHEARER. Functional heterogeneity of L3T4$^+$ T cells in MRL-*lpr/lpr* mice. L3T4$^+$ T cells suppress major histocompatibility complex–self-restricted L3T4$^+$ T helper cell function in association with autoimmunity

2183 YUTAKA KAWAKAMI, STEVEN A. ROSENBERG, and MICHAEL T. LOTZE. Interleukin 4 promotes the growth of tumor-infiltrating lymphocytes cytotoxic for human autologous melanoma

2193 MICHEL AWWAD and ROBERT J. NORTH. Immunologically mediated regression of a murine lymphoma after treatment with anti-L3T4 antibody. A consequence of removing L3T4$^+$ suppressor T cells from a host generating predominantly Lyt-2$^+$ T cell–mediated immunity

2207 SHIBO JIANG, PEDRO M. PERSECHINI, ARTURO ZYCHLINSKY, CHAU-CHING LIU, BICE PERUSSIA, and JOHN DING-E YOUNG. Resistance of cytolytic lymphocytes to perforin-mediated killing. Lack of correlation with complement-associated homologous species restriction

2221 BRIAN L. KOTZIN, SUSAN K. BABCOCK, and LYNNE R. HERRON. Deletion of potentially self-reactive T cell receptor specificities in L3T4$^-$, Lyt-2$^-$ T cells of *lpr* mice

2231 MARÍA L. TORIBIO, ANTONIO DE LA HERA, JANNIE BORST, MIGUEL A. R. MARCOS, CARLOS MÁRQUEZ, JOSÉ M. ALONSO, ALICIA BÁRCENA, and CARLOS MARTÍNEZ-A. Involvement of the interleukin 2 pathway in the rearrangement and expression of both α/β and γ/δ T cell receptor genes in human T cell precursors

2251 BARBARA SHERRY, PATRICIA TEKAMP-OLSON, CAROL GALLEGOS, DIANE BAUER, GEORGE DAVATELIS, STEPHAN D. WOLPE, FRANK MASIARZ, DORIS COIT, and ANTHONY CERAMI. Resolution of the two components of macrophage inflammatory protein 1, and cloning and characterization of one of those components, macrophage inflammatory protein 1β

2261 PETER H. BRODEUR, GAMAL E. OSMAN, JAMES J. MACKLE, and THOMAS M. LALOR. The organization of the mouse *Igh-V* locus. Dispersion, interspersion, and the evolution of V_H gene family clusters

2279 KAYO INABA, MUNEO INABA, TATSUO KINASHI, KEI TASHIRO, MARGIT WITMER-PACK, MARY CROWLEY, GILLA KAPLAN, JAY VALINSKY, NIKOLAUS ROMANI, SUSUMU IKEHARA, SHIGERU MURAMATSU, TASUKU HONJO, and RALPH M. STEINMAN. Macrophages phagocytose thymic lymphocytes with productively rearranged T cell receptor α and β genes

2295 MICHAEL MCGROGAN, CHRISTIAN SIMONSEN, RANDY SCOTT, JOE GRIFFITH, NINA ELLIS, JACKIE KENNEDY, DAVID CAMPANELLI, CARL NATHAN, and JOELLE GABAY. Isolation of a complementary DNA clone encoding a precursor to human eosinophil major basic protein

2309 ANNICK HAREL-BELLAN, SCOTT DURUM, KATHRYN MUEGGE, ABUL K. ABBAS, and WILLIAM L. FARRAR. Specific inhibition of lymphokine biosynthesis and autocrine growth using antisense oligonucleotides in Th1 and Th2 helper T cell clones

2319 SILVIO HEMMI, JAN GELIEBTER, RICHARD A. ZEFF, ROGER W. MELVOLD, and STANLEY G. NATHENSON. Three spontaneous *H-2D^b* mutants are generated by genetic microrecombination (gene conversion) events. Impact on the H-2-restricted immune responsiveness

2337 PAUL J. VOOGT, ELS GOULMY, WILLEMIEN F. J. VEENHOF, MEENA HAMILTON, WILLEM E. FIBBE, JON J. VAN ROOD, and J. H. FREDERIK FALKENBURG. Cellularly defined minor histocompatibility antigens are differentially expressed on human hematopoietic progenitor cells

BRIEF DEFINITIVE REPORTS

2349 A. MORETTA, C. BOTTINO, E. CICCONE, G. TAMBUSSI, M. C. MINGARI, S. FERRINI, G. CASORATI, P. VARESE, O. VIALE, N. MIGONE, and L. MORETTA. Human peripheral blood lymphocytes bearing T cell receptor γ/δ. Expression of CD8 differentiation antigen correlates with the expression of the 55-kD, Cγ2-encoded γ chain

2355 Tatsuo Kiyohara, Keisuke Taniguchi, Shigehiro Kubota, Shigehiko Koga, Tsutomu Sakuragi, and Yutaka Saitoh. Induction of lymphokine-activated killer-like cells by cancer chemotherapy

2361 Gregg J. Silverman, Fernando Goñi, José Fernandez, Pojen P. Chen, Blas Frangione, and Dennis A. Carson. Distinct patterns of heavy chain variable region subgroup use by human monoclonal autoantibodies of different specificity

2367 Bradley E. Britigan, Thomas J. Coffman, Danielle R. Adelberg, and Myron S. Cohen. Mononuclear phagocytes have the potential for sustained hydroxyl radical production. Use of spin-trapping techniques to investigate mononuclear phagocyte free radical production

2373 Jean-Paul Coutelier, Jos T. M. Van Der Logt, Frans W. A. Heessen, Anne Vink, and Jacques Van Snick. Virally induced modulation of murine IgG antibody subclasses

2379 Louis A. Matis, Angel Ezquerra, and John E. Coligan. Expression of two distinct T cell receptor α/β heterodimers by an antigen-specific T cell clone

2385 Paul Rothman, Stuart Lutzker, Wendy Cook, Robert Coffman, and Frederick W. Alt. Mitogen plus interleukin 4 induction of Cε transcripts in B lymphoid cells

2391 Megan Sykes, Michael A. Sheard, and David H. Sachs. Graft-versus-host–related immunosuppression is induced in mixed chimeras by alloresponses against either host or donor lymphohematopoietic cells

2397 Hiroshi Ikeda, Osamu Taguchi, Toshitada Takahashi, Gen Itoh, and Yasuaki Nishizuka. L3T4 effector cells in multiple organ–localized autoimmune diseases in nude mice grafted with embryonic rat thymus

2403 Ermanno Ciccone, Oriane Viale, Daniela Pende, Mauro Malnati, Roberto Biassoni, Giovanni Melioli, Alessandro Moretta, Eric O. Long, and Lorenzo Moretta. Specific lysis of allogeneic cells after activation of $CD3^-$ lymphocytes in mixed lymphocyte culture

2409 Akira Seto, Michiko Kawanishi, Shuichi Matsuda, and Katsuhiko Ogawa. Seronegative virus carriers in the infection of rabbits with human T lymphotropic virus type I

APPENDIX

2415 Zanvil A. Cohn and Ralph M. Steinman. The immunological and infectious sequelae of the acquired immune deficiency syndrome

2425 Author Index To Volume 168